Documents

for

FOIA Request

#EPA-R6-2013-005422

Part #2

United States Environmental Protection Agency
Washington D.C. 20460

EPA NPDES Compliance Inspection Report

Section A: National Data System Coding

Transaction Code	NPDES	yr/mo/day	Inspection Type	Inspector	Fac Type
1 N 2	5 3 LAU0003891 11 12	130108 17 18	= 19	R 20	3

21 SIC CODE: 0251 66

Inspection Work Days	Facility Evaluation Rating	BI	QA	Reserved
67	69 70 N 71	N 72	N 73	74 75 80

Section B: Facility Data

Name and Location of Facility Inspected	Entry Time/Date	Permit Effective Date
The [redacted] Farm is located at [redacted]	0925 / 1/8/2013	N/A
	Exit Time/Date	Permit Expiration Date
	1100 / 1/8/2013	N/A

Name(s) of On-Site Representatives	Title(s)	Phone (318)
[redacted]	[redacted]	[redacted]

Name, Address of Responsible Official	Title	
[redacted]	Owner	
	Phone Number	Contacted: YES X NO ___
	[redacted]	

Section C: Areas Evaluated During Inspection
(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

N	Permit	N	Flow Measurement	N	Storm Water	N	CSO/SSO/Sewer Overflow
N	Records/Reports	N	Self-Monitoring Program	N	Sludge Handling/Disposal	N	Pollution Prevention
M	Facility Site Review	N	Compliance Schedules	N	Pretreatment	N	Multimedia
N	Effluent/Receiving Waters	N	Laboratory	M	Operations & Maintenance		

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

The [redacted] Farm operates four chicken houses, stocking 17,400 birds per house (totaling 69,600). The Pam Holloway farm is located across the street from the Benoit Holloway farm. These two broiler operations share the use of the two mortality incinerators that are located on the Pam Holloway property. Otherwise these two broiler operations operate as independent facilities. The farm raises the flocks of chickens for 54 days, to a weight of 7.25 lbs. The farm did not maintain any records on litter application or soils data.

Litter clean-out occurs once a year, and there is very little caking-out between flocks, as the owner indicated that they want to build up litter mass during the winter months to help with heat build-up. The owner has a litter barn to contain the litter, and it is all sold for $14-$17 per ton. However, the owner leases out the use of their pastures for land application and hay cropping. One of these pastures was located above a stock tank which appeared visibly impacted by nutrients, as the litter was found to have been applied onto a sloping pasture, within 20' of the stock tank. Due to the inadequate buffer set-back from the stock tank and the heavy presence of poultry dust at the exhaust fan area of the chicken houses (see the attached photolog), the facility was issue a "Marginal" rating for Facility Site Review and Operations & Maintenance.

Biosecurity: The inspectors toured the site on foot, wearing double plastic overboots, a cloth disposable jumper suit and hair nets. The GSA vehicle was parked next to the highway at the facility entrance.

Attachments: Photolog,

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Telephone	Date
Juan Ibarra	US EPA/6EN-WR/(214) 665-8493	25 February 2013
Scott Stine	US EPA/6EN-WR/(214) 665-7182	
Signature of Reviewer	Agency/Office	Date
	US EPA/6EN-WR	27 Feb. 2013

040212

Supplemental Information for CAFO Facilities

I. FACILITY	
Permit Number	LAU000389
Facility Name	[redacted]

II. GENERAL INFORMATION
How many total animals does the facility have right now which contribute waste to the animal waste control structure? [Facility has 250,000 pigs > 55 lbs., or 800 wet cows, 100 dry, 25 heifers]
69,600
How many total animals can the facility have at full capacity? [The most they would ever have at one time]
69,600
Identify how many of these are confined in a pen and how many are out in pasture. [Facility would have no more than approximately 1500 wet cows, 500 dry cows, 75 heifers, and 100 calves, all of the wet cows are confined in a pen, all dry cows, heifers, and calves are pastured]
All contained within four chicken houses

III. DAIRIES
How many times per day does the facility milk the cows and how long does it take per session?
N/A
For the milking parlor, estimate the amount of water usage/day per animal, or estimate total amount of freshwater used for washing and cleaning cows and the parlor/milking session.
N/A
If there is a concrete pad leading to the milking parlor, how does the facility clean the area [scrape/hose] and estimate the amount of fresh water usage and where does the wastewater go?
N/A
Do the cows stay in a loafing shed or some other type of area that requires cleaning?
N/A
If so, how is it cleaned out? [flushed/scraped]
N/A
If it is flushed, do they use fresh water or recycled lagoon water?
N/A
If freshwater is used, estimate how much and how often it is cleaned.
N/A
If water quantity is not known, request information on pumping capacity in order to calculate a pumping rate.
N/A
Is storm water runoff commingled with wastewater, or is there a separate retention structure?
N/A
Are there any other areas that require the use of fresh water and discharges to the animal waste retention structure (AWRS), i.e. lane flushing, etc?
N/A
If yes, what is it, where is it located, how much water is used, and how often?
N/A
Does the drinking water system have a proper functioning automatic shut-off float or does the watering system have a continuous flow?
N/A
If continuous, estimate amount of waste water generated.
N/A

IV. ALL OTHER CAFOs
Describe the type of barn cleaning process used at the facility.

The facility does a total litter clean-out about once a year, and there is very little caked-out between flocks. The farm uses a tiller to fluff up the litter between flocks.
Does the facility use fresh water or recycled water to clean or flush the barns?
No. Fresh drinking water is provided by a deep well or the TRI Water system for back-up.
If fresh, how often are the barns flushed or cleaned and estimate how much fresh water is used and flushed to the AWRS.
N/A
Estimate the amount of fresh water usage/day for any other purpose where fresh water is used and discharges to the AWRS.
N/A
Is storm water runoff commingled with wastewater, or is there a separate retention structure for each water source?
N/A
Are there any other areas that require the use of fresh water and discharge to the AWRS or any other potential additions of fresh water to the AWRS?
No
If so, where, how much water, and how often is it collected?
N/A
Does the drinking water system have a proper functioning automatic shut-off float or is there a continuous flow?
Yes. The bird watering trays have a stainless steel nipple.
V. Waste Disposal and Utilization
Please provide a current map showing the facility, lagoon, and all land application areas, with reference to the following information. If no map is available, please provide GPS coordinates for the facility, all application sites, and carcass disposal sites. Public web site for aerial photos: http://nmviewogc.cr.usgs.gov/viewer.htm
How many acres are in each application site. Please identify each application site using a reference numbering system? [field 212 has 120 acres]
Litter is sold, but some is placed on land that the owner leases out. This was the reason that litter was applied within 20' upslope of a stock tank. This stock tank was visibly impaired by nutrients, and the inspector informed the owner's husband that a greater buffer needed to be established considering the slope. Although there is a vegetative buffer, considering the slope of the land, a buffer in excess of 35' should be established.
What type of crop is being grown on each application site and what is the estimated and actual yield goal for each crop at each application site? [field 212 grows winter wheat with a 60 bu/ac yield goal or five ton forage/ac]
Grass pasture.
What is the cropping scenario for each application site? [grazing, grain crop, hay, silage]
Hay
If grazing a field where animal waste is applied, provide information on the average stocking rate per year [or average stocking rate per how many months animals are allowed to graze] and average size of animals.
N/A
What method is used to apply waste at each location? [center pivot, honey wagon, flood, manure spreader]
Spreader
Which field(s) receive(s) solids and/or liquids and for what time frame [field 212 received 500,000 gallons of effluent beginning in August and ending in May, in March it received 10 ton/ac of solid manure], or information on pumping rate and time frame of application.
No records are kept, however, the total clean-out usually occurs in the Spring.
Collect either a photo copy of records showing how much effluent was applied to each field with corresponding application dates for the last tow years, or if no records are available, ask when applications are generally made and estimate how much.
Not available
Collect either a photo copy of records showing how much solid waste was applied to each site, with corresponding application dates for the last two years, or if no records are available, ask when applications are generally made and estimate how much.
N/A
Is effluent being blended with fresh water prior to land application?
No
If so, how is it blended and how much is blended?

N/A
Provide information for the last two years on quantity and when fresh water is applied to each application site where animal waste is also applied.
N/A
Collect a photo copy of daily rainfall records for the last two years to determine if applications are made during periods when it is raining or when soils are saturated.
Not available
Collect a photo copy of the last 2-3 years of soils analyses.
Not available
Collect a photo copy of the two most current solid waste analyses.
Not available
Collect a photo copy of the two most current effluent analyses.
N/A
Collect a photo copy of the most current forage sample analysis for each crop (not a common item).
Not available
Was any commercial fertilizer applied at any time?
If so, what type, where, when, and how much? [field 212 received 300 lbs of urea, (46-0-0) in March of 2005]
VI. CARCASS DISPOSAL
Describe the method the facility uses for carcass disposal.
Incineration
If utilizing on-site animal carcass disposal, provide a description of the method used.
Above
If utilizing on-site animal carcass disposal, does disposal area contain all storm water runoff?
Yes. The area was clean and under a small roof.
If utilizing on-site animal carcass disposal, is there some type of vegetative buffer strip around the disposal site?
Yes, the grass between the chicken houses.
If so, what type and estimate how wide.
Approximately 70-80'
If utilizing on-site animal carcass disposal, please provide death numbers on a per year basis. [last year death records indicate there were 10 cows weighing approximately 1200 lbs, four heifers weighing approximately 750 lbs, and seven calves weighing approximately 250 lbs]
Estimated at 2-3%
If utilizing on-site animal carcass disposal, identify and delineate the disposal site on a map. Provide approximate dimensions of disposal site and GPS coordinates if available.
See attached aerial photograph.
VII. SILAGE LEACHATE
Is there a constructed berm around silage storage area to contain leachate runoff?
N/A
Provide information regarding type of silage, approximate moisture content when harvested and approximate dimensions of silo, pit, or pile, and note if it is covered or open. [corn silage harvested with 30% moisture and stored in a concrete 40'X100'X12' covered area]
N/A
Are there any other potential sources for uncontrolled runoff from feed or commodity storage areas?
N/A

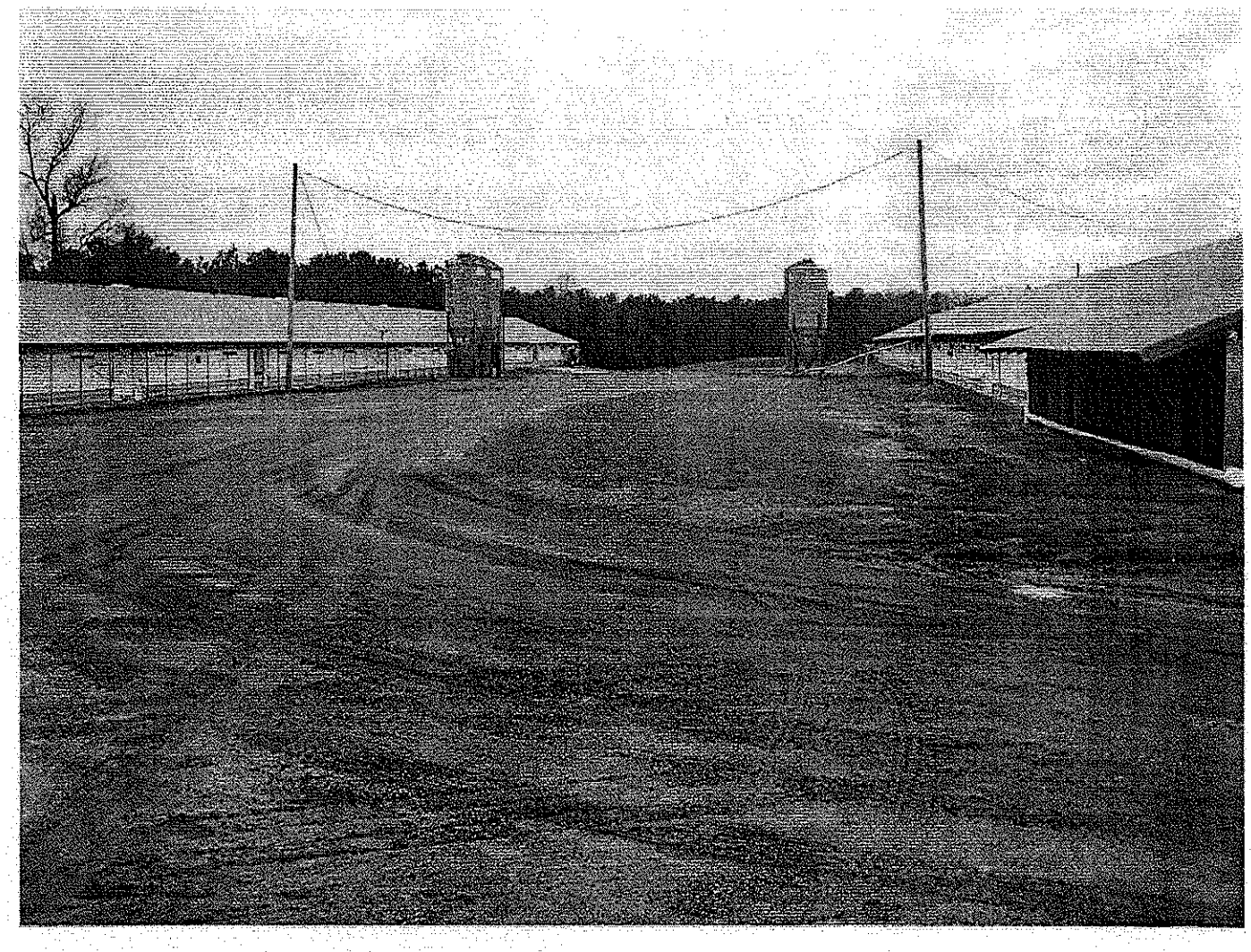
VIII. BEDDING MATERIAL
How is bedding material stored and how is it disposed of?
N/A
Is there potential runoff?
N/A
Are there any other livestock areas that have a potential for uncontrolled runoff? [calving areas, dry cow areas, heifer pens]
N/A
VIIII. MONITORING WELL DATA
Provide copies of analytical data from all groundwater monitoring wells for last 3 years as well as a map and GPS coordinates of each well location.
N/A
X. LAGOON LINER
Provide a copy of engineering specs for design and construction of AWRS. If this information is not available, provide a detailed description of information used to design the capacity and size of all the AWRS, including information of the material used to prevent wastewater leaching.
N/A
Provide information for age of liner, dimensions, capacity, depth to water table, type of liner, thickness of liner, inspection and maintenance records, and describe any repairs if completed.
N/A
Provide same information for all other storm water ponds, lagoons, liner information, and locations.
N/A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 1

Photographer: Juan Ibarra	Date: 8 January 2013	Time: 0958
City/County: [redacted]		State: [redacted]
Location: [redacted]		
Subject: Looking west between the poultry houses.		

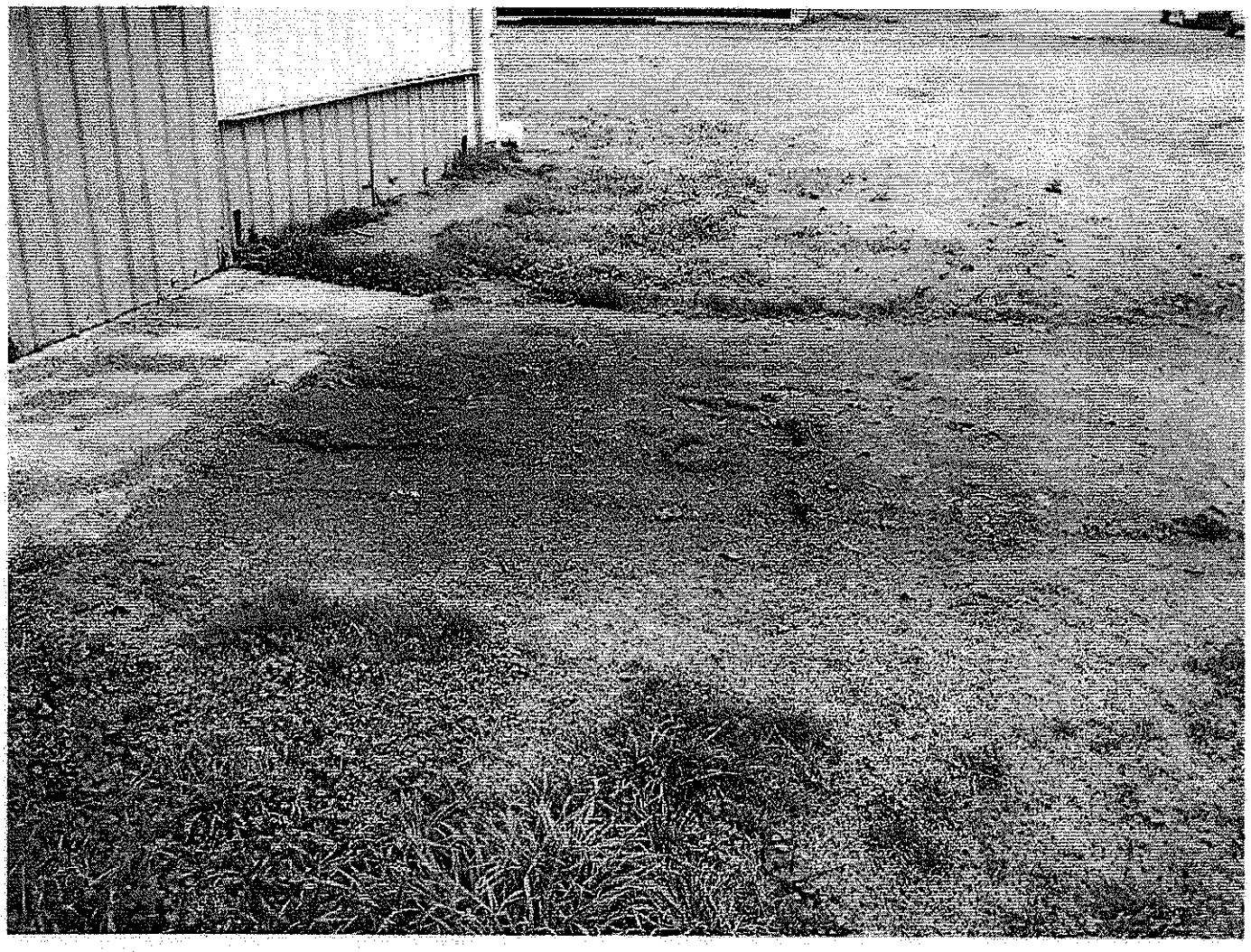


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 2

Photographer: Juan Ibarra	Date: 8 January 2013	Time: 0959
City/County: [redacted]		State: [redacted]
Location: [redacted]		
Subject: Litter spillage was found in front of the most southerly house. Need to shovel up the excess amounts of spilled litter when cleaning the barns or removing chickens.		



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 3

Photographer: Juan Ibarra	Date: 8 January 2013	Time: 1004
City/County: [redacted]		State: [redacted]
Location: [redacted]		
Subject: Feathers and poultry house dust have accumulated at the exhaust fans of the most southern house. Drainage would move down the drainage ditch shown on the left side of the road, and into the stock tank located about 300' beyond the poultry houses.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 4

Photographer: Juan Ibarra	Date: 8 January 2013	Time: 1004
City/County: [redacted]		State: [redacted]
Location: [redacted]		
Subject: Feathers and poultry house dust have accumulated at the exhaust fans of the most southern house. Drainage would move down the drainage ditch shown on the left side of the road, and into the stock tank located about 300' beyond the poultry houses. The stock tank is in the distant background.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 5

Photographer: Juan Ibarra	Date: 8 January 2013	Time: 1006
City/County: [redacted]		State: [redacted]
Location: [redacted]		
Subject: Close-up of the feathers and poultry house dust that have accumulated on the ground, outside of the exhaust fans of the most southern house.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 6

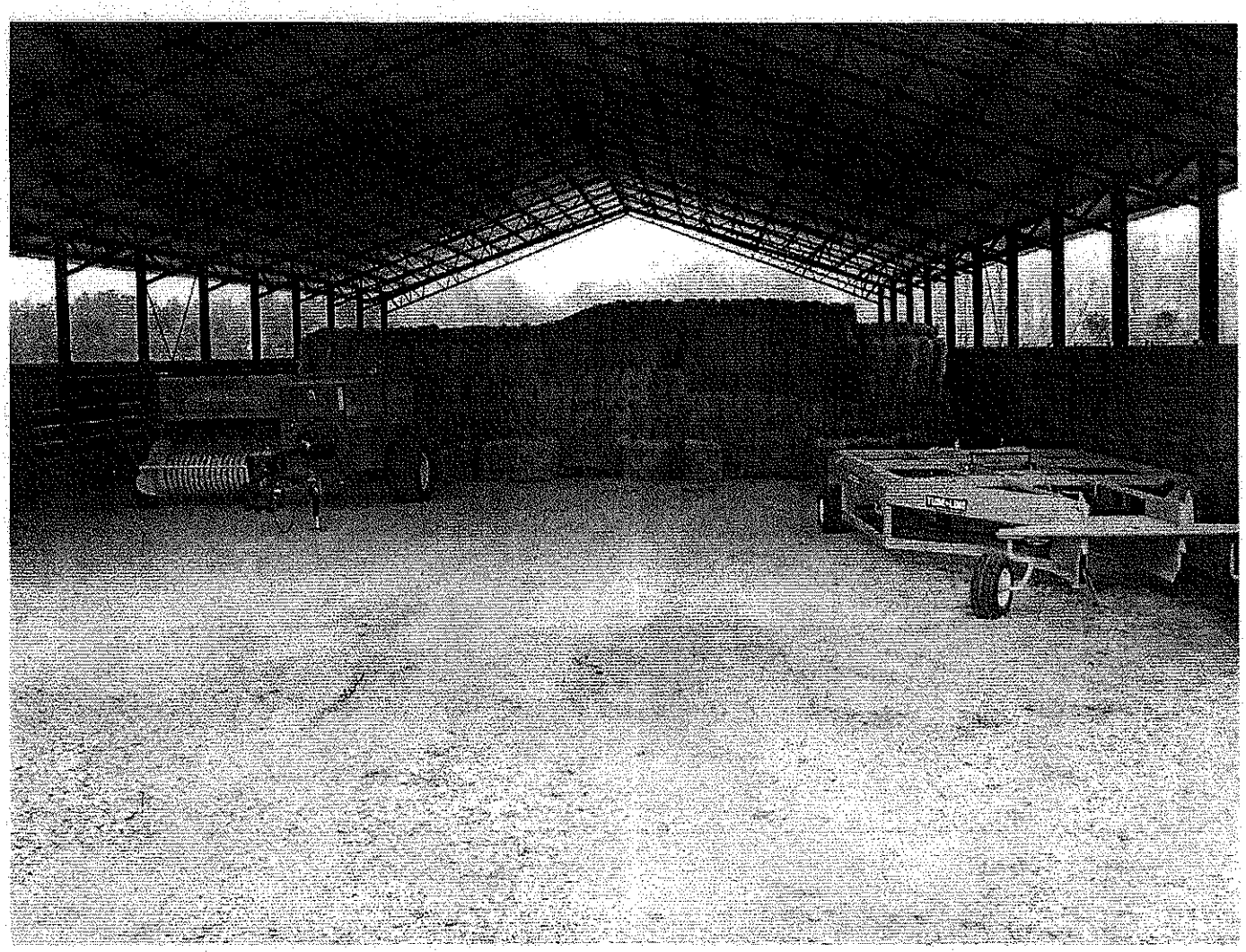
Photographer: Juan Ibarra	Date: 8 January 2013	Time: 1013
City/County: [redacted]		State: [redacted]
Location: [redacted]		
Subject: Exhaust fan feathers and dust, as seen at the second house (next to the most southern house). The view is looking east.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 7

Photographer: Juan Ibarra	Date: 8 January 2013	Time: 1024
City/County: [redacted]		State: [redacted]
Location: [redacted]		
Subject: The litter barn does not have any chicken litter. The owner stated that he will remove all the hay and equipment when he performs the four total house clean-outs that will occur this Spring.		



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 8

Photographer: Juan Ibarra	Date: 8 January 2013	Time: 1030
City/County: [redacted]		State: [redacted]
Location: [redacted]		
Subject: The stock tank has a lot of duck weed growing on the surface. This tank could be affected by the application of chicken litter, by the tenant that leases the property, within 20' of the stock tank. A greater buffer of close to 100' was recommended due to the sloping grade of the pasture in this area, but at a minimum, 35' is a standard vegetated buffer from water bodies. A deer camp is in the background.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 9

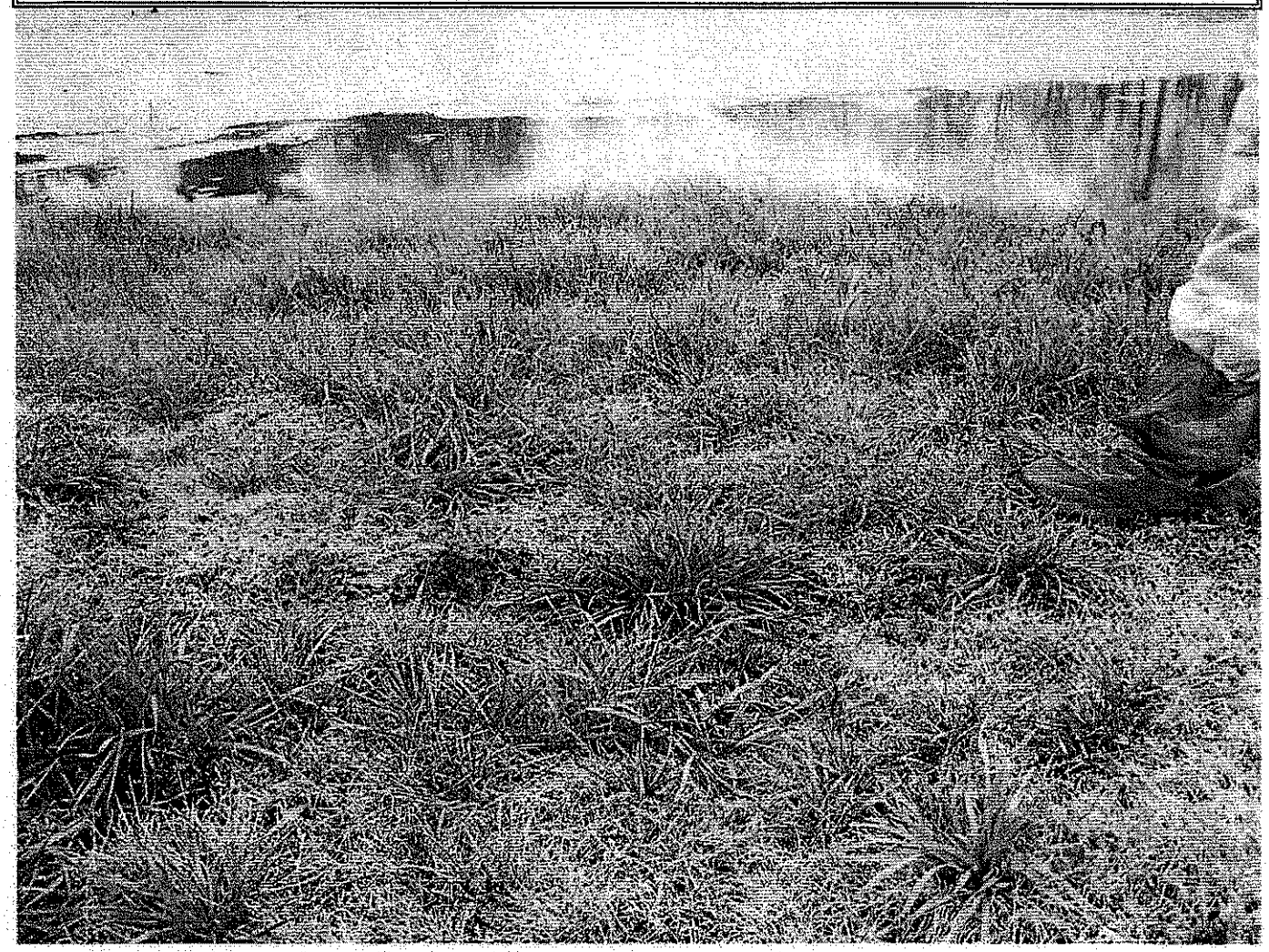
Photographer: Juan Ibarra	Date: 8 January 2013	Time: 1032
City/County: [redacted]		State: [redacted]
Location: [redacted]		
Subject: View of the land applied litter, within about 20' of the stock tank.		

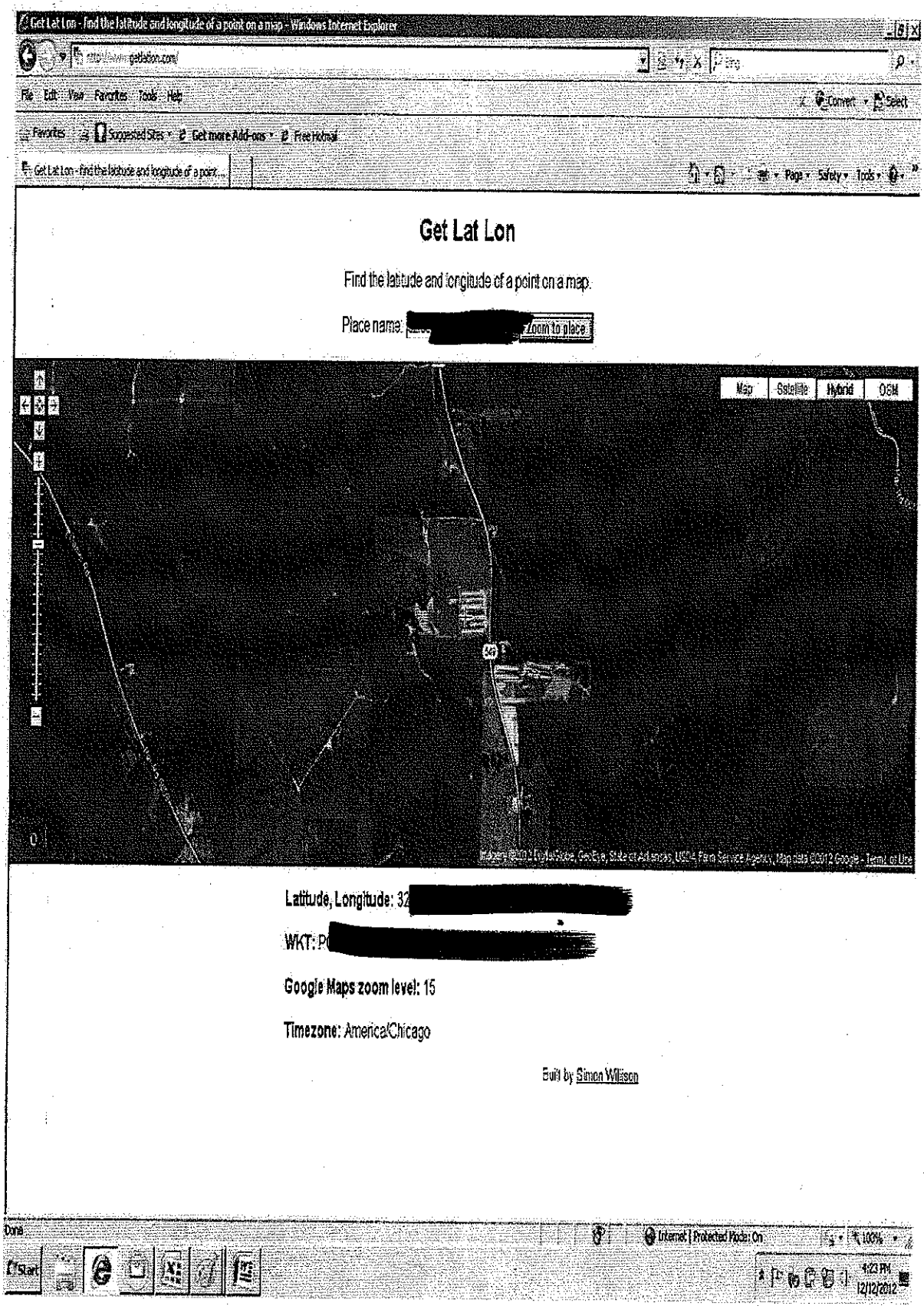
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 10

Photographer: Juan Ibarra	Date: 8 January 2013	Time: 1033
City/County: [redacted]		State: [redacted]
Location: [redacted]		
Subject: A close-up view of the land applied litter, within about 20' of the stock tank. It appears that this application, which is too close to the stock tank, may be contributing to the water quality impairment of the stock tank. **A buffer closer to 100'**, but no less than 35' should help reduce the impact of land applied nutrients on the stock tank, considering the slope that exists above the stock tank.		

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Get Lat Lon
Find the latitude and longitude of a point on a map.
Place name:
Zoom to place
Map
Satellite
Hybrid
OSM
Latitude, Longitude: 32
WKT: P
Google Maps zoom level: 15
Timezone: America/Chicago
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12/12/2012

Get Lat Lon - find the latitude and longitude of a point on a map - Windows Internet Explorer

getlatlon.com

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Convert Select

Favorites Suggested Sites Get more Add-ons Free Hotmail

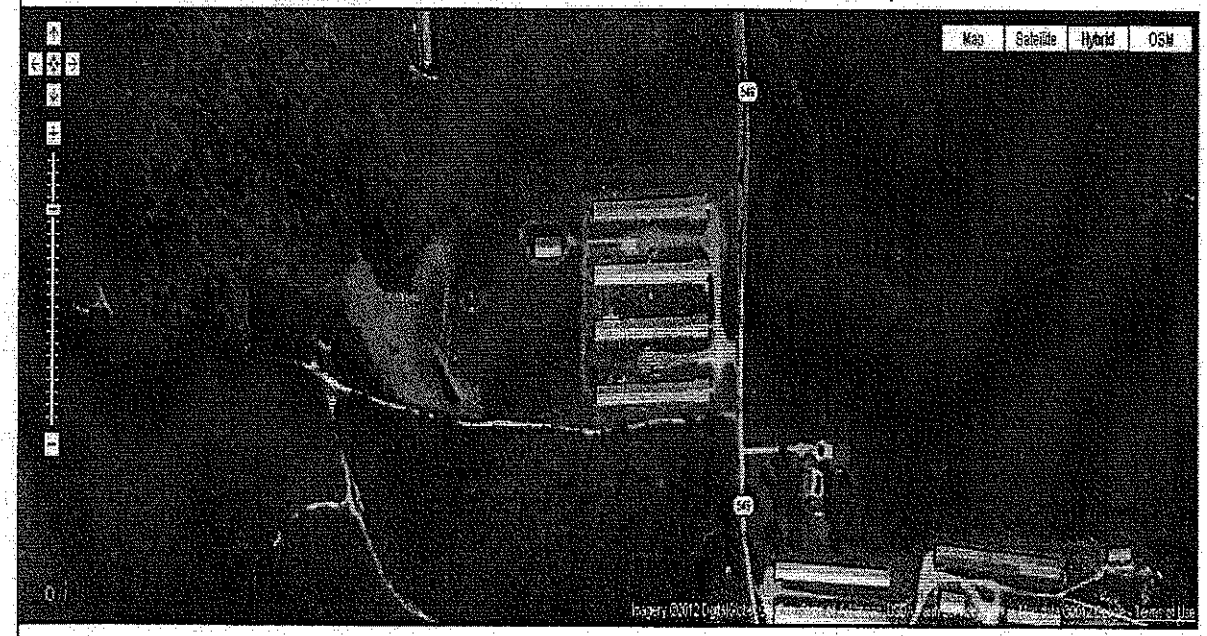
Get Lat Lon - find the latitude and longitude of a point...

Page Safety Tools

Get Lat Lon

Find the latitude and longitude of a point on a map.

Place name: [redacted] Zoom to place



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WKT: [redacted]

Google Maps zoom level: 17

Timezone: America/Chicago

Local time: Thu, 13 Dec 2012 07:49:06 -0600

Built by Simon Willison

Done

Internet | Protected Mode: On

100%

Start

7:49 AM
12/13/2012

Get Lat Lon - find the latitude and longitude of a point on a map - Windows Internet Explorer

File Edit View Favorites Tools Help

Favorites Suggested Sites Get more Add-ons Free Hotmail

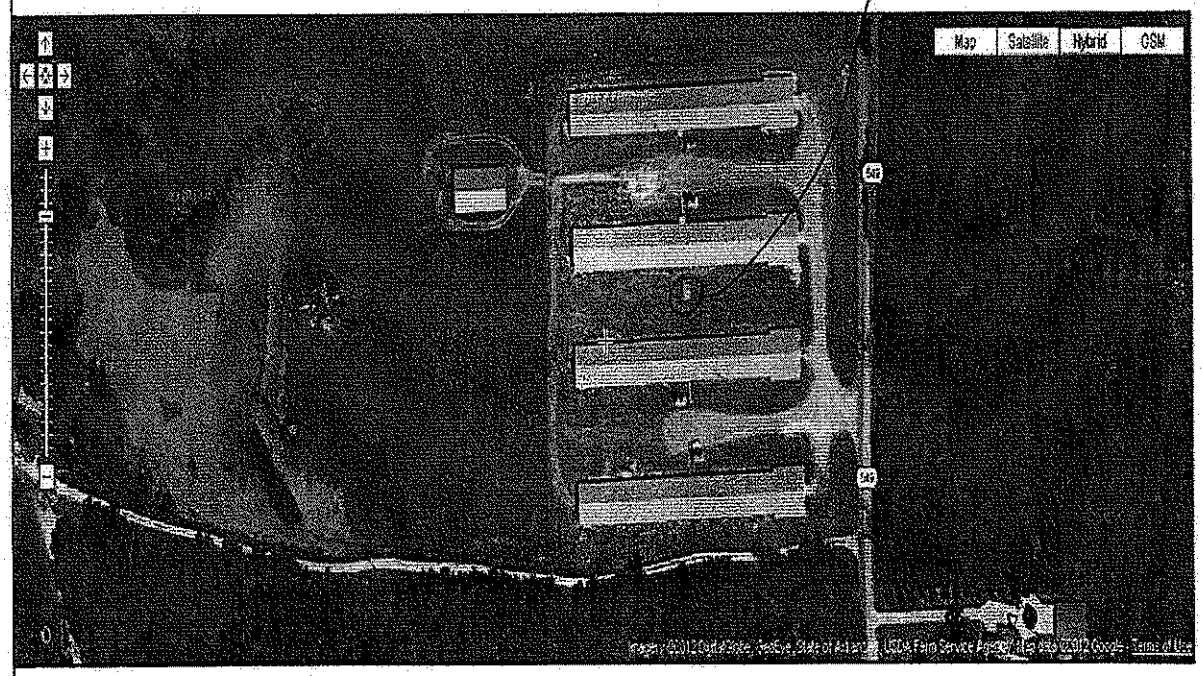
Get Lat Lon - find the latitude and longitude of a point...

Get Lat Lon

Find the latitude and longitude of a point on a map.

Place name: [redacted] Zoom to place

incinerator



Latitude, Longitude: 3[redacted]

WKT: POINT(-92[redacted]

Google Maps zoom level: 18

Timezone: America/Chicago

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Built by Simon Willison

Done

Internet | Protected Mode: On

Start

7:51 AM
12/13/2012

F10 89


[redacted]
Family Owned Since 1939
[redacted]
Disease Control In Effect
Do Not Enter
without authorization
Proper Sanitation
required for entry
STOP
STOP
Control de enfermedad vigente
Prohibido el paso
sin previa autorizacion
Higiene adecuada
requerida para entrar

United States Environmental Protection Agency
Washington D.C. 20460

EPA NPDES Compliance Inspection Report

Section A: National Data System Coding

Transaction Code	NPDES	yr/mo/day	Inspection Type	Inspector	Fac Type
1 N	2 5 3 A R U 0 0 0 0 8 4 11 12	1 1 0 4 0 6 17 18	= 19	R 20	3

21 S I C C O D E : 0 2 5 1 66

Inspection Work Days	Facility Evaluation Rating	BI	QA	Reserved
67	69 70 N 71	N 72	N 73	74 75 80

JUL 19 2011

Section B: Facility Data

Name and Location of Facility Inspected	Entry Time/Date	Permit Effective Date
The [redacted] is located at [redacted]	1204 / 4/6/11	N/A
	Exit Time/Date	Permit Expiration Date
	1510 / 4/6/11	N/A

Name(s) of On-Site Representatives	Title(s)	
[redacted]	Owner	[redacted]

Name, Address of Responsible Official	Title	
[redacted]	Owner	
	Phone Number	Contacted: YES X NO ___
	[redacted]	

Section C: Areas Evaluated During Inspection
(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

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M	Facility Site Review	N	Compliance Schedules	N	Pretreatment	N	Multimedia
N	Effluent/Receiving Waters	N	Laboratory	U	Operations & Maintenance		

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

Records/Reports, Sludge Handling and Operations & Maintenance were rated as "Unsatisfactory" because of the following issues: 1) The Arkansas Soil and Water Conservation Commission prepared the NMP on 11/9/05. The plan expired on 11/8/10. 2) The owner is not documenting the chicken litter land application to Fields 1 and 2. He guesses as to how much litter was applied each year, however, according to the 2011 ANRC Registration (attached), Mr. Thao applied about 35 tons of litter to his fields in 2010, and 1675 tons was supposed to be exported off-site. 3) The owner applies the manure in October/November, and it is not timed to crop needs. 4) There was incinerator ash stored on the ground, tracked out chicken litter at the litter barn, and caked chicken dust/feathers by the house exhaust fans. All of these wastes are subject to storm water runoff, and documented in the attached photolog. 5) The owner has not had a soil analysis of Field 1 and 2, to which he applied litter in 2010, since 2003.

This facility holds an ANRC registration, but does not hold CAFO permits with either the State or EPA. Mr. Thao raises an average of five flocks per year within six dry scrape chicken houses. Each flock is kept for about seven weeks, until the broilers average about six pounds. The facility is currently housing approximately 27,000 broilers per house within the six houses, for a total of 162,000 chickens.

Biosecurity: The State Veterinarian was called the week before the inspection. There were no disease issues in the Lincoln area. The inspector wore tyvek overalls, a hair net and boot covers while evaluating the site on-foot.

Attachments: Photolog, Facility Documentation

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Telephone	Date
Juan Ibarra	US EPA/6EN-AS/(214) 665-8493	8 July 2011
Signature of Reviewer	Agency/Office	Date
David Lu	US EPA/6EN-AS	07/11/2011

Concentrated Animal Feeding Operation (CAFO) Checklist

I. FACILITY OPERATION INFORMATION AND PERMIT VERIFICATION	
Permit Number	N/A
Facility Name	[redacted]
Receiving Water(s)/Watershed	Lincoln Lake Watershed
25-year/24-hour rainfall amount	
Animals stabled/confined/fed/maintained annually ≥45 days	Yes
Animals stabled/confined/fed/maintained annually ≤45 days	

TYPE OF CAFO	NUMBER OF ANIMALS
Dairy (Cattle)	
Slaughter/Feeder Cattle	
Swine (over 55 lbs)	
Horses	
Sheep or Lambs	
Chickens	162,000 broilers on dry litter
Turkeys	
Ducks	
Other	

Copy of Notice of Intent on site?			N/A
Copy of permit on site?			N/A
FONSI or EIS on-site? (new or expanded facilities after 2-10-93)			N/A
Groundwater discharge plan #DP? ___			N/A
II. PROPER OPERATION AND MAINTENANCE			**U**
Solid and/or liquid wastes handled properly to prevent surface and/or groundwater pollution using recognized practices of good agricultural management? See notes on the cover sheet, detailing the improper management of incinerator ash, litter track-out from the barn, caked chicken dust at the house exhaust fans, lack of soil analysis for the past 8 years, lack of land application records on Fields 1 and 2, and litter application timing issues.			U
Liquid retention facility maintained at a level so it will retain a 25-year, 24-hour rainfall event?		N/A	
Ditches, dikes, berms, or terraces, designed to carry peak flows expected at times when the 25-year, 24-hour rainfall event occurs, used to isolate open lots and associated wastes from outside surface drainage?			N/A
Do the animals confined at the CAFO come into direct contact with waters of the U.S.?		N	
Waste handling, treatment and management results in the destruction or adverse modification of the critical habitat of, or contribute to the taking of, endangered or threatened species or plants, fish, or wildlife?		N	
Pesticides properly handled and disposed of in a manner to prevent any significant pollutants from entering waters of the U.S.? Use mice blocks.	Y		
Dead animals properly disposed of within three days? By: Incineration and composting on a daily basis	Y		
Appropriate measures available to prevent and clean up sills of toxic pollutants, including material handling procedures in areas of potential spills?			N/A
Facility compliant with applicable requirements for discharges through a MS4 serving a population of 100,000 or more?			N/A

MS4 Operator: _____			
III. POLLUTION PREVENTION PLAN (P3)	S		
A. Preparation	S		
Prepared in accordance with good engineering practices and includes measures necessary to limit pollutants in runoff? The NMP was a five year plan (dated 11/9/05) which expired on 11/8/10. The Arkansas Soil and Water Conservation Commission (now the ANRC) prepared the original NMP.	Y		
Identify individual(s) responsible for developing and implementing P3?	Y		
Signed by owner or signatory authority?	Y		
Copy retained on site?	Y		
P3 refers to SCS plan for facility design, construction criteria, and waste management? The plan is an ASWCC design.	Y		
SCS plan retained on site?	Y		
Plan amended prior to any change in design, construction, operation, or maintenance, or if plan is ineffective in controlling pollutants in discharges?			N/A
B. Description of potential pollutant sources	S		
Site map indicating an outline of each drainage area, structural controls, and surface water?	Y		
List of any materials that are used, stored, and disposed of at the facility?	Y		
List of any significant spills of materials such as pesticides, cleaning agents, fuels, and other pollutants? *40CFR302.4:Table of Haz&Tox Substances & RQs;* *As per 40CFR307(A) Significant spill:>=RQ*			N/A
C. Waste management controls			U
Location and description of structural and non-structural controls?		N/A	
Inspected four times per year for structural integrity and maintenance?		N/A	
Dates and findings of each inspection logged and retained on site?		N/A	
Document site specific information used to determine retention capacity and land application rates? The owner has not maintained records of land application of chicken litter for 2010. He reportedly did not land apply litter to his fields in 2009. See Attachment 1 – ANRC Certificates of Registration for 2009 and 2011 where the owner estimated an application of 35 tons of litter.		N	
Document existing retention facility capacity and the assumptions and calculations used in determining the capacity? Current capacity: _____			N/A
Retention facility embankments			N/A
Existing facilities properly maintained and show no signs of structural breakage?			N/A
Document design standards?			N/A
Embankment walls stabilized to prevent erosion? How stabilized: _____			N/A
Retention facility dewatering			N/A
Schedule for liquid waste removal?			N/A
Retention facility has a minimum of one foot freeboard (preferably two feet) above the 25-year, 24-hour design capacity?		N/A	
Weekly log of specific measurements of wastewater level?		N/A	
Dewatering equipment available if necessary?		N/A	
Freeboard restored after any rain, accumulation of wastes, or process generated wastewater?		N/A	
Permanent marker installed and maintained within the retention			N/A

facility to show volume required for a 25-year, 24-hour rainfall event (visible from the top of the levee)?			
Rain gauge installed on-site and a log kept of all measurable rainfall events?		N/A	
Documentation of no significant hydrologic connection?			N/A
Documentation of no liner requirement, OR			N/A
Written determination by SCS engineer, professional engineer, or qualified groundwater scientist that a liner is not needed to prevent leakage; OR			N/A
Documentation certified by a professional engineer or qualified groundwater scientist, that there will be no significant leakage from the retention structure, or that leakage would not migrate to surface waters?			N/A
No significant leakage because in-situ materials have hydraulic conductivities no greater than 1 x 10^{-7} cm/sec with a thickness of 1.5 feet or greater, or its equivalent in other materials; OR			N/A
Leakage will not migrate to a surface water, including maps showing groundwater flow paths, or that the leakage enters a confined environment?			N/A
Liner construction and maintenance			N/A
Liner construction			N/A
Liner maintenance			N/A
Liners protected from animals by fences or other protective devices?		N/A	
Trees allowed to grow at such a distance, that the root zone extends into the liner?		N/A	
Any mechanical or structural damage to the liner evaluated by a SCS engineer, professional engineer or qualifed groundwater scientist within 30 days of damage?			N/A
Documentation of liner maintenance kept with the P3?			N/A
Documentation review and site evaluation conducted by a SCS engineer, professional engineer or qualified groundwater scientist every five years?			N/A
Documentation of compliance with notification to install a leak detection system or monitoring wells, and three years sampling data (1st year sampling data retained for life of facility) kept with the P3?			N/A
Wastewater removal and land application			N/A
Facility has a schedule of wastewater removal by contract hauler capable of dewatering the retention facilities?			N/A
Facility has evaporation systems capable of dewatering the retention facilities?			N/A
Facility has irrigation systems capable of dewatering the retention facilities?			N/A
The discharge or drainage of irrigated wastewater results in a discharge to water of the U.S.?		N/A	
Wastewater irrigated when ground is frozen or saturated or during rainfall?		N/A	
Irrigation practices managed so as to reduce or minimize ponding, puddling, and nuisance conditions such as odors and flies?		N/A	
Facilities including ponds, pipes, ditches, pumps, diversion, and irrigation equipment maintained to ensure ability to fully comply with the terms of the permit and P3?		N/A	
Adequate equipment and/or land application area available for removal of such waste and wastewater as required to maintain the retention capacity of the facility?		N/A	
Manure and pond solids handling and land application			U
On-premises land application? The owner has not kept adequate or accurate records for the land application of litter. See above	Y		

comments. However, he did apply litter to . ,elds 1 and 2 in 2010, but according to his 2011 ANRC Certificate of Registration (Attachment 1) and the summary of litter trip tickets in Attachment 2, he removed somewhere between 1210.02 tons and 1675 tons of litter (the records are ambiguous). The owner has a decaking machine with a spreader attachment.			
Description of manure handling procedures and equipment availability?	Y		
Discharge (runoff) of waste from the application site?		N	
Edge-of-field, grassed strips used to separate watercourses from runoff carrying eroded soil and manure particles?	Y		
Off-premises land application – manure sold or given away	Y		
Log of manure removed from facility, including date of removal, name of hauler, and quantity of waste removed?	Y		
Nutrient sample analysis given to hauler?		N	
Storage and/or surface disposal of manure in the 100-year flood plain or near watercourses not protected by adequate berms or other structures?		N	
Runoff from manure storage piles retained on-site? Litter kept in a shed. Only the track-out (see photolog) was exposed to storm water.		N/A	
Document practices which minimize waste manure transport to watercourses in P3?		N	
D. Preventive maintenance			N/A
P3 includes an appropriate schedule for preventive maintenance?		N/A	
Preventive maintenance program involves:			
Inspection and maintenance of all runoff management devices (cleaning separators, catch basins)?		N/A	
Inspection and testing of facility equipment and containment structures?		N/A	
Maintenance log kept which documents preventive maintenance done?		N/A	
E. Sediment and erosion prevention			N/A
Areas which have a high potential for significant soil erosion identified? No erosion seen on site.			N/A
Measures used to limit erosion and pollutant runoff identified?			N/A
F. Employee training			N/A
Employees responsible for work activities relating to permit compliance regularly trained or informed of information pertinent to the proper operation and maintenance of the facility and waste disposal?			N/A
Training dates, at appropriate frequencies for different levels of personnel, documented in the P3?			N/A
G. Inspection and recordkeeping			N/A
Person named in P3 as individual responsible for drafting and implementing the P3 responsible also for inspections and recordkeeping?		N/A	
Incidents such as spills and other discharges, including quantity and pollution potential, included in the records?			N/A
Visual inspections:			
Designated equipment and facility areas inspected by the authorized person?		N/A	
Material handling areas inspected for evidence of, or the potential for, pollutants entering the drainage system?			N/A
A follow-up procedure used to ensure that appropriate action has been taken in response to the inspection?		N/A	
Site inspections:			
Complete inspection of the facility by the authorized person at least once/year?		N/A	

The inspection includes verification that:			
The description of potential pollutant sources is accurate?		N/A	
The drainage map has been updated or otherwise modified to reflect current conditions?			N/A
The controls outlined in the P3 to reduce pollutants are being implemented and are adequate?		N/A	
A report made documenting the findings of the inspection and retained as part of the P3?		N/A	
Records maintained on-site for a minimum of three years?	Y	N/A	
IV. MONITORING AND REPORTING REQUIREMENTS	S		
A. Notification of discharge		N/A	
Immediate verbal notice to EPA?		N/A	
Written notice within 14 days to EPA and document in P3?		N/A	
B. Sampling of discharge		N/A	
Sampling location adequate for representative samples and taken from the overflow or discharge structure?		N/A	
Parameters and sampling frequency agree with permit?		N/A	
A minimum of one grab sample taken within the 1st 30 minutes of discharge unless sampling waiver due to dangerous climatic conditions is documented?		N/A	
Samples taken and analyzed in accordance with EPA approved methods for water analysis listed in 40CFR136?		N/A	
Sample collection and analysis records retained with P3?		N/A	
Sampling date, time, and exact location?		N/A	
Individual collecting the sample?		N/A	
Analysis dates and times?		N/A	
Individual performing the analysis?		N/A	
Analytical methods/techniques used?		N/A	
Analytical results consistent with DMR data?		N/A	
C. Laboratory	Y		
Contract laboratory?			
Name:	University of Arkansas		
Address:			
Telephone:			
Contact:			
Material analyzed:	Soil analysis		
V. CONSULTANTS		N	
Consulting firm used?			
Name:			
Address:			
Telephone:			
Contact:			

Supplemental Information for CAFO Facilities

I. FACILITY	
Permit Number	ARU000084
Facility Name	[redacted]

II. GENERAL INFORMATION
How many total animals does the facility have right now which contribute waste to the animal waste control structure? [Facility has 250,000 pigs > 55 lbs., or 800 wet cows, 100 dry, 25 heifers]
162,000 with about 27,000 broilers in each of six houses.
How many total animals can the facility have at full capacity? [The most they would ever have at one time]
165,000
Identify how many of these are confined in a pen and how many are out in pasture. [Facility would have no more than approximately 1500 wet cows, 500 dry cows, 75 heifers, and 100 calves, all of the wet cows are confined in a pen, all dry cows, heifers, and calves are pastured]
All confined in a total of six houses

III. DAIRIES
How many times per day does the facility milk the cows and how long does it take per session?
N/A
For the milking parlor, estimate the amount of water usage/day per animal, or estimate total amount of freshwater used for washing and cleaning cows and the parlor/milking session.
N/A
If there is a concrete pad leading to the milking parlor, how does the facility clean the area [scrape/hose] and estimate the amount of fresh water usage and where does the wastewater go?
N/A
Do the cows stay in a loafing shed or some other type of area that requires cleaning?
N/A
If so, how is it cleaned out? [flushed/scraped]
N/A
If it is flushed, do they use fresh water or recycled lagoon water?
N/A
If freshwater is used, estimate how much and how often it is cleaned.
N/A
If water quantity is not known, request information on pumping capacity in order to calculate a pumping rate.
N/A
Is storm water runoff commingled with wastewater, or is there a separate retention structure?
N/A
Are there any other areas that require the use of fresh water and discharges to the animal waste retention structure (AWRS), i.e. lane flushing, etc?
N/A
If yes, what is it, where is it located, how much water is used, and how often?
N/A
Does the drinking water system have a proper functioning automatic shut-off float or does the watering system have a continuous flow?
N/A
If continuous, estimate amount of waste water generated.
N/A

IV. ALL OTHER CAFOs
Describe the type of barn cleaning process used at the facility.

Use a "Housekeeper" de-caking machine that removes the surface litter and leaves the layer of litter on the floor.
Does the facility use fresh water or recycled water to clean or flush the barns?
No water is used to clean the barns.
If fresh, how often are the barns flushed or cleaned and estimate how much fresh water is used and flushed to the AWRS.
N/A
Estimate the amount of fresh water usage/day for any other purpose where fresh water is used and discharges to the AWRS.
None discharged from the houses. Watering system for the birds is with a stainless steel nipple. The facility has a water meter to monitor water usage.
Is storm water runoff commingled with wastewater, or is there a separate retention structure for each water source?
N/A
Are there any other areas that require the use of fresh water and discharge to the AWRS or any other potential additions of fresh water to the AWRS?
N/A
If so, where, how much water, and how often is it collected?
N/A
Does the drinking water system have a proper functioning automatic shut-off float or is there a continuous flow?
Yes- there is a valve on a nipple.
V. Waste Disposal and Utilization
Please provide a current map showing the facility, lagoon, and all land application areas, with reference to the following information. If no map is available, please provide GPS coordinates for the facility, all application sites, and carcass disposal sites. Public web site for aerial photos: http://nmviewogc.cr.usgs.gov/viewer.htm
How many acres are in each application site. Please identify each application site using a reference numbering system? [field 212 has 120 acres]
The facility has applied litter to Field 1 (16.5 acres) and Field 2 (14.6 acres) in 2010. The owner uses a de-caking machine after each flock rotation. See the attached site map found in Attachment 3.
What type of crop is being grown on each application site and what is the estimated and actual yield goal for each crop at each application site? [field 212 grows winter wheat with a 60 bu/ac yield goal or five ton forage/ac]
Bermuda with fescue in Field 1 and Bermuda on Field 2.
What is the cropping scenario for each application site? [grazing, grain crop, hay, silage]
Cut three times per year for hay on Field 2, and grazing on Field 1.
If grazing a field where animal waste is applied, provide information on the average stocking rate per year [or average stocking rate per how many months animals are allowed to graze] and average size of animals.
Information was not available
What method is used to apply waste at each location? [center pivot, honey wagon, flood, manure spreader]
The owner uses the de-caking machine, and also hires outside help with a manure spreader.
Which field(s) receive(s) solids and/or liquids and for what time frame [field 212 received 500,000 gallons of effluent beginning in August and ending in May, in March it received 10 ton/ac of solid manure], or information on pumping rate and time frame of application.
The owner is not keeping land application records. However, data contained within the 2005 NMP contained recommendations for the Litter Plan, RUSLE Worksheet, P Index Worksheet, and Field Management Recommendations for litter application. These records are contained in Attachment 4.
Collect either a photo copy of records showing how much effluent was applied to each field with corresponding application dates for the last tow years, or if no records are available, ask when applications are generally made and estimate how much.
Land application occurs in October or November. The owner stated that he applied 10 loads of litter in 2010, and none in 2009.
Collect either a photo copy of records showing how much solid waste was applied to each site, with corresponding application dates for the last two years, or if no records are available, ask when applications are generally made and estimate how much.
The owner estimates how much litter was applied, but he does not maintain any land application records. The inspector recommended that he track the application amounts and dates, by field. However, he only applies once a year in October/November.
Is effluent being blended with fresh water prior to land application?
N/A

If so, how is it blended and how much is blended?
N/A
Provide information for the last two years on quantity and when fresh water is applied to each application site where animal waste is also applied.
N/A
Collect a photo copy of daily rainfall records for the last two years to determine if applications are made during periods when it is raining or when soils are saturated.
None
Collect a photo copy of the last 2-3 years of soils analyses.
The only soil records found were from 2003. See Attachment 5.
Collect a photo copy of the two most current solid waste analyses.
See Attachment 6.
Collect a photo copy of the two most current effluent analyses.
N/A
Collect a photo copy of the most current forage sample analysis for each crop (not a common item).
N/A
Was any commercial fertilizer applied at any time?
No
If so, what type, where, when, and how much? [field 212 received 300 lbs of urea, (46-0-0) in March of 2005]
N/A
VI. CARCASS DISPOSAL
Describe the method the facility uses for carcass disposal.
Incineration and composting
If utilizing on-site animal carcass disposal, provide a description of the method used.
See above. Ash was being store on the ground (see the attached photolog). Otherwise, the owner reported that he mixes the ash with the litter.
If utilizing on-site animal carcass disposal, does disposal area contain all storm water runoff?
No – the ash stored on the ground is exposed to storm water.
If utilizing on-site animal carcass disposal, is there some type of vegetative buffer strip around the disposal site?
Yes
If so, what type and estimate how wide.
The entire area is surrounded by woods.
If utilizing on-site animal carcass disposal, please provide death numbers on a per year basis. [last year death records indicate there were 10 cows weighing approximately 1200 lbs, four heifers weighing approximately 750 lbs, and seven calves weighing approximately 250 lbs]
Most mortalities occur when the chicks are young. Estimated mortality is about 3.5%.
If utilizing on-site animal carcass disposal, identify and delineate the disposal site on a map. Provide approximate dimensions of disposal site and GPS coordinates if available.
See photolog. The litter barn is located at the northeast corner of the production area. Site maps are contained within Attachment
VII. SILAGE LEACHATE
Is there a constructed berm around silage storage area to contain leachate runoff?
N/A
Provide information regarding type of silage, approximate moisture content when harvested and approximate dimensions of silo, pit, or pile, and note if it is covered or open. [corn silage harvested with 30% moisture and stored in a concrete 40'X100'X12' covered area]
N/A

Are there any other potential sources for uncontrolled runoff from feed or commodity storage areas?
N/A
VIII. BEDDING MATERIAL
How is bedding material stored and how is it disposed of?
The rice hull bedding within the houses are disposed of with the litter.
Is there potential runoff?
No
Are there any other livestock areas that have a potential for uncontrolled runoff? [calving areas, dry cow areas, heifer pens]
No
VIII. MONITORING WELL DATA
Provide copies of analytical data from all groundwater monitoring wells for last 3 years as well as a map and GPS coordinates of each well location.
N/A
X. LAGOON LINER
Provide a copy of engineering specs for design and construction of AWRS. If this information is not available, provide a detailed description of information used to design the capacity and size of all the AWRS, including information of the material used to prevent wastewater leaching.
N/A
Provide information for age of liner, dimensions, capacity, depth to water table, type of liner, thickness of liner, inspection and maintenance records, and describe any repairs if completed.
N/A
Provide same information for all other storm water ponds, lagoons, liner information, and locations.
N/A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

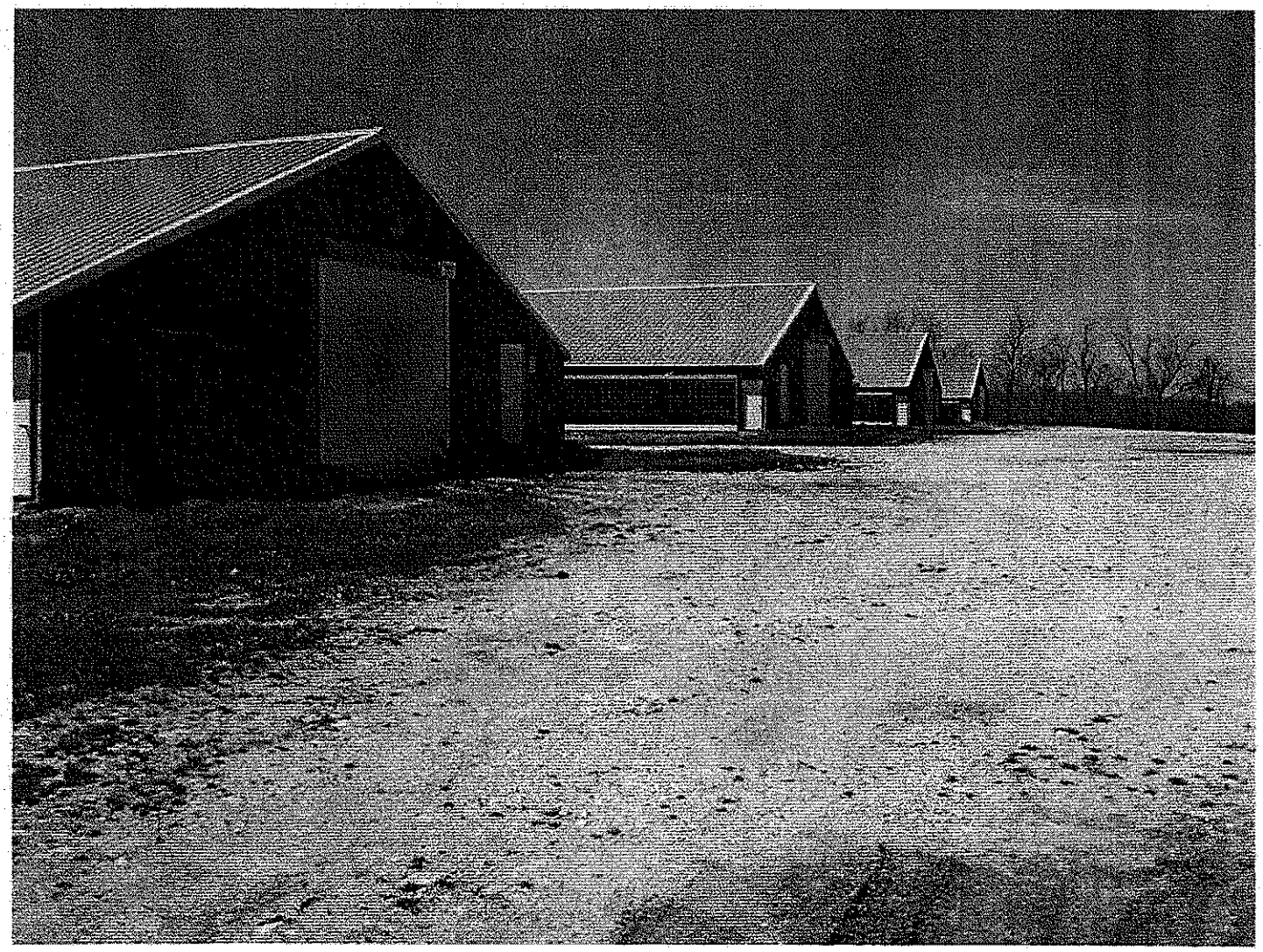
Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 12:09
Facility Name: [redacted]
Picture Number: 1
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084

Description:
Entry to the S[redacted]m, looking southeast.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Picture Number: 2

Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 12:12
Facility Name: [redacted]
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084



Description:
Looking at chicken houses three thru six, looking west.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 13:52
Facility Name: [redacted]
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084

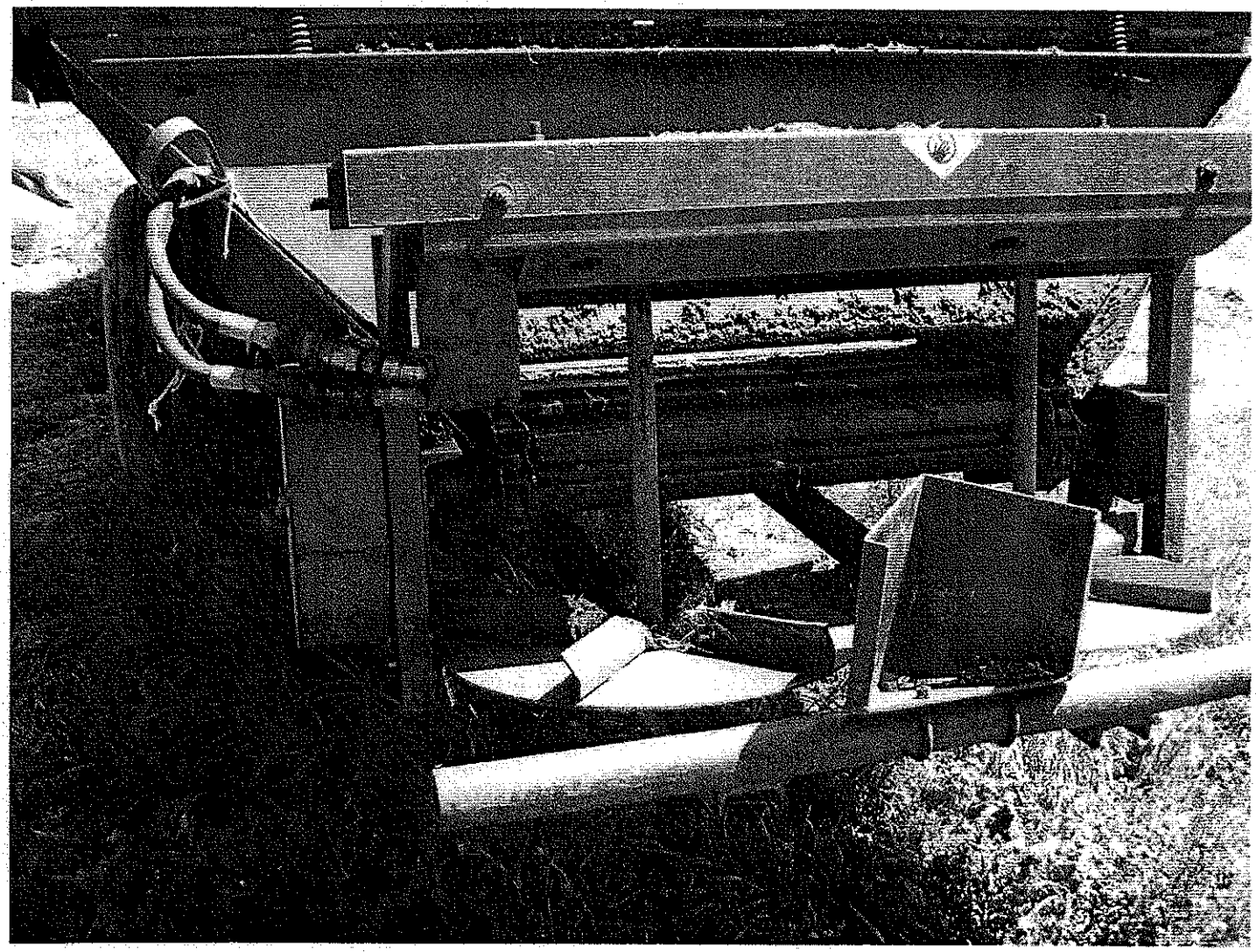
Picture Number: 3

Description:
The "Poultry Housekeeper" which is used to sift the chicken litter in the houses, and for land application . The spreader attachment is on the back side of the unit.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Picture Number: 4

Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 13:54
Facility Name: [redacted]
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084

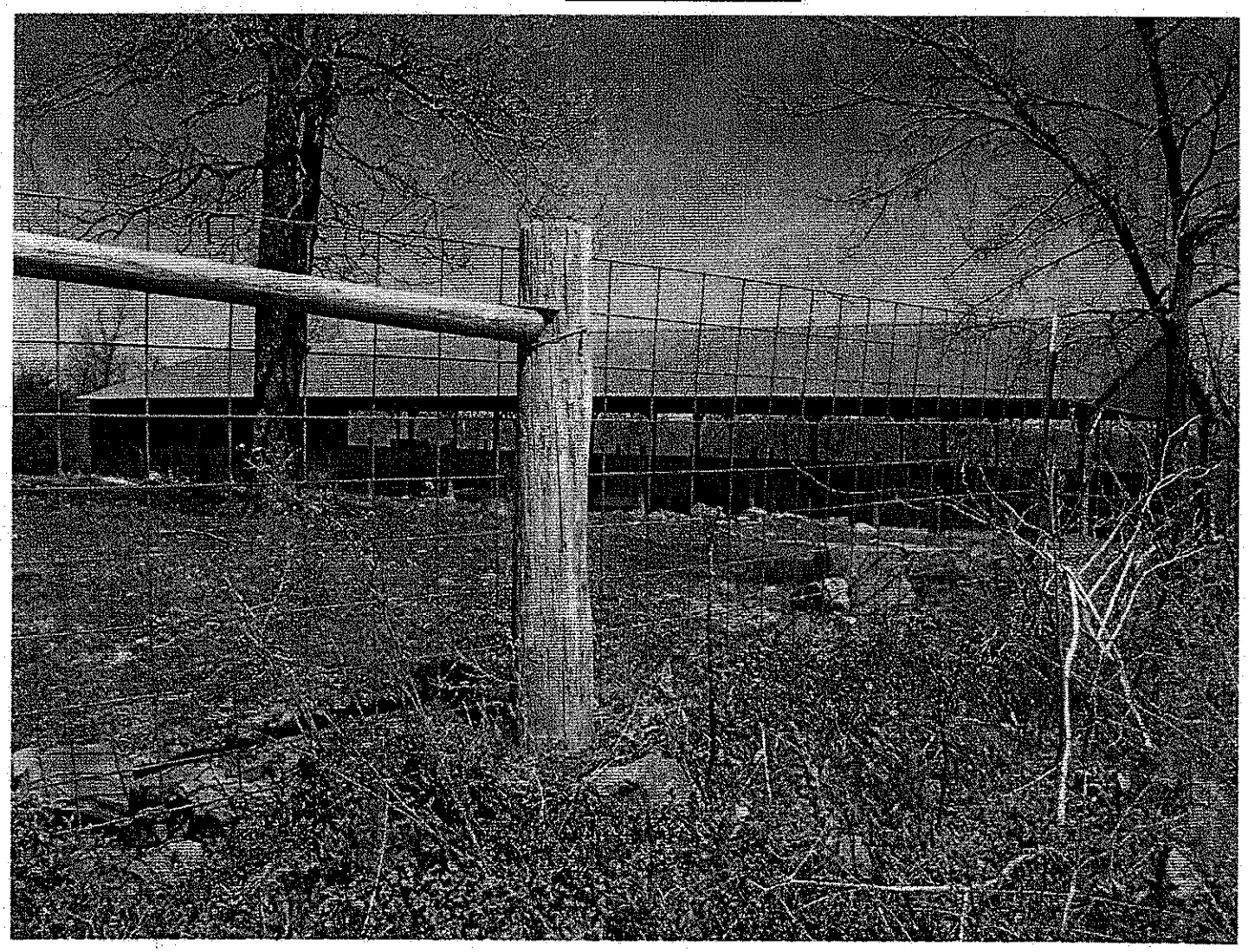


Description:
The spreader end of the Poultry Housekeeper.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Picture Number: 5

Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 14:07
Facility Name: [redacted]
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084



Description:
Looking northeast at the manure shed.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 14:10
Facility Name: [redacted]
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084

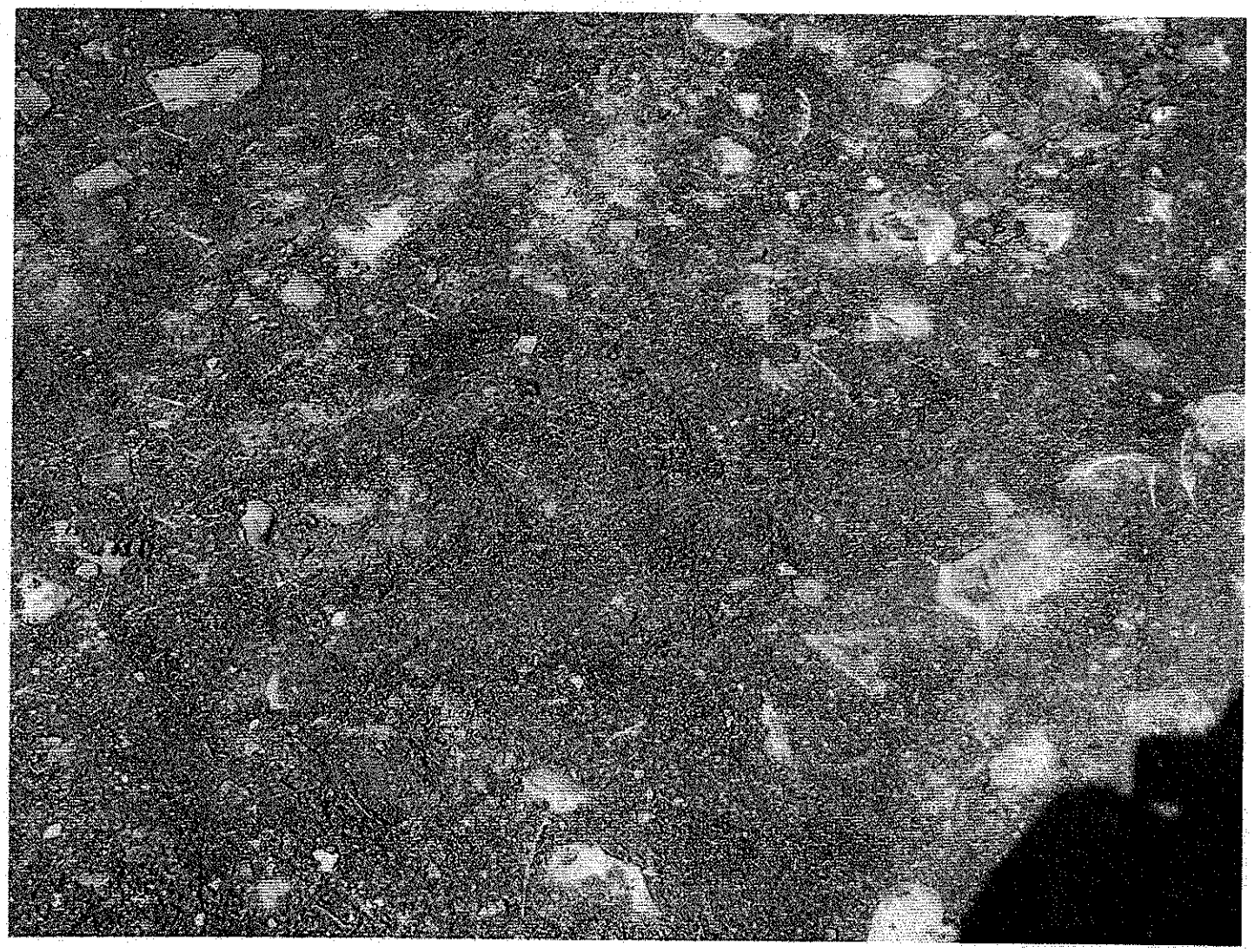
Picture Number: 6

Description:
Litter has been tracked out of the shed. Rice hulls are also visible.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Picture Number: 7

Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 14:10
Facility Name: [redacted]
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084

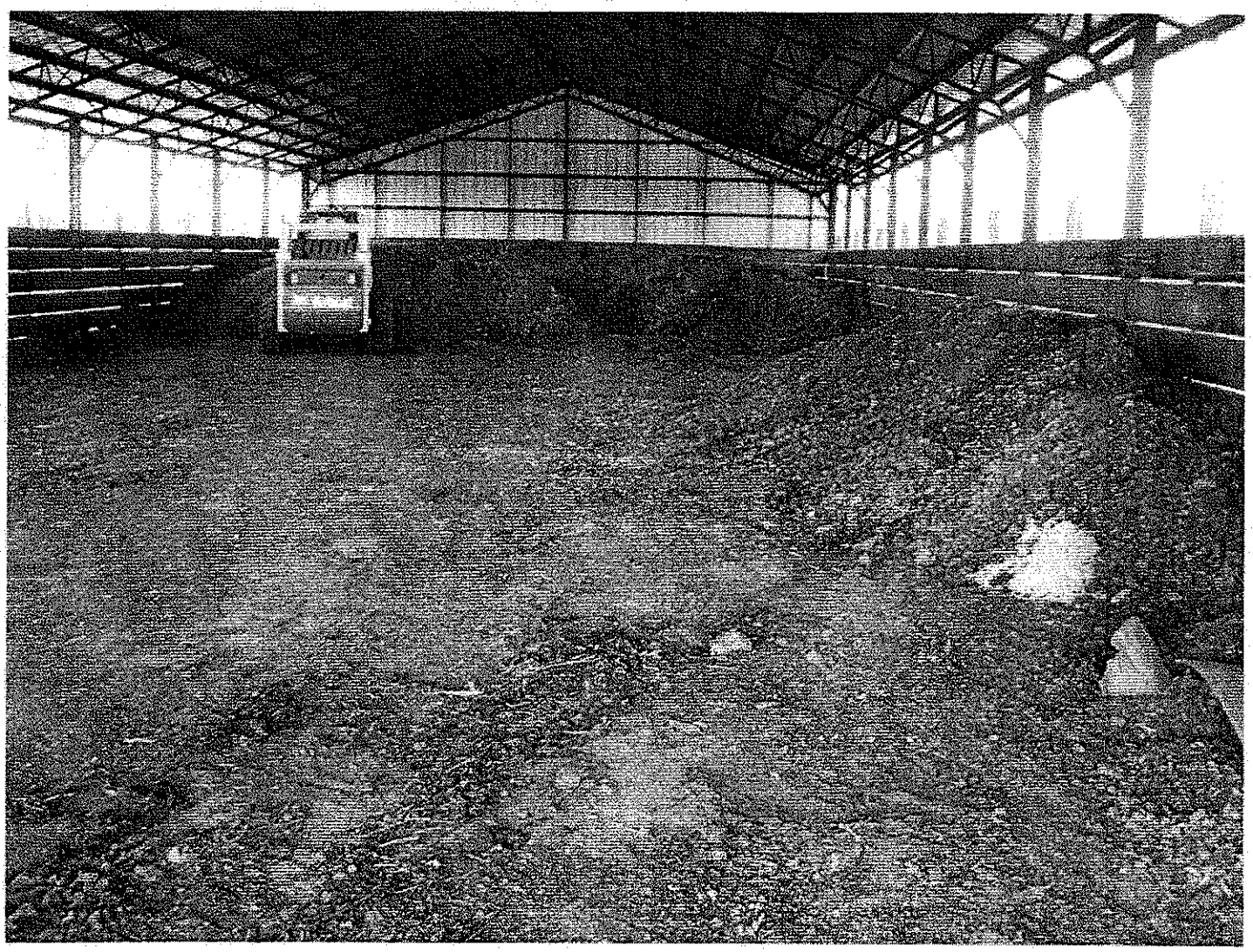


Description:
Close-up of the tracked-out litter and rice hulls.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Picture Number: 8

Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 14:11
Facility Name: [redacted]
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084



Description:
The manure shed. The owner reported that he began to empty the shed in March, and will finish within a week.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Picture Number: 9

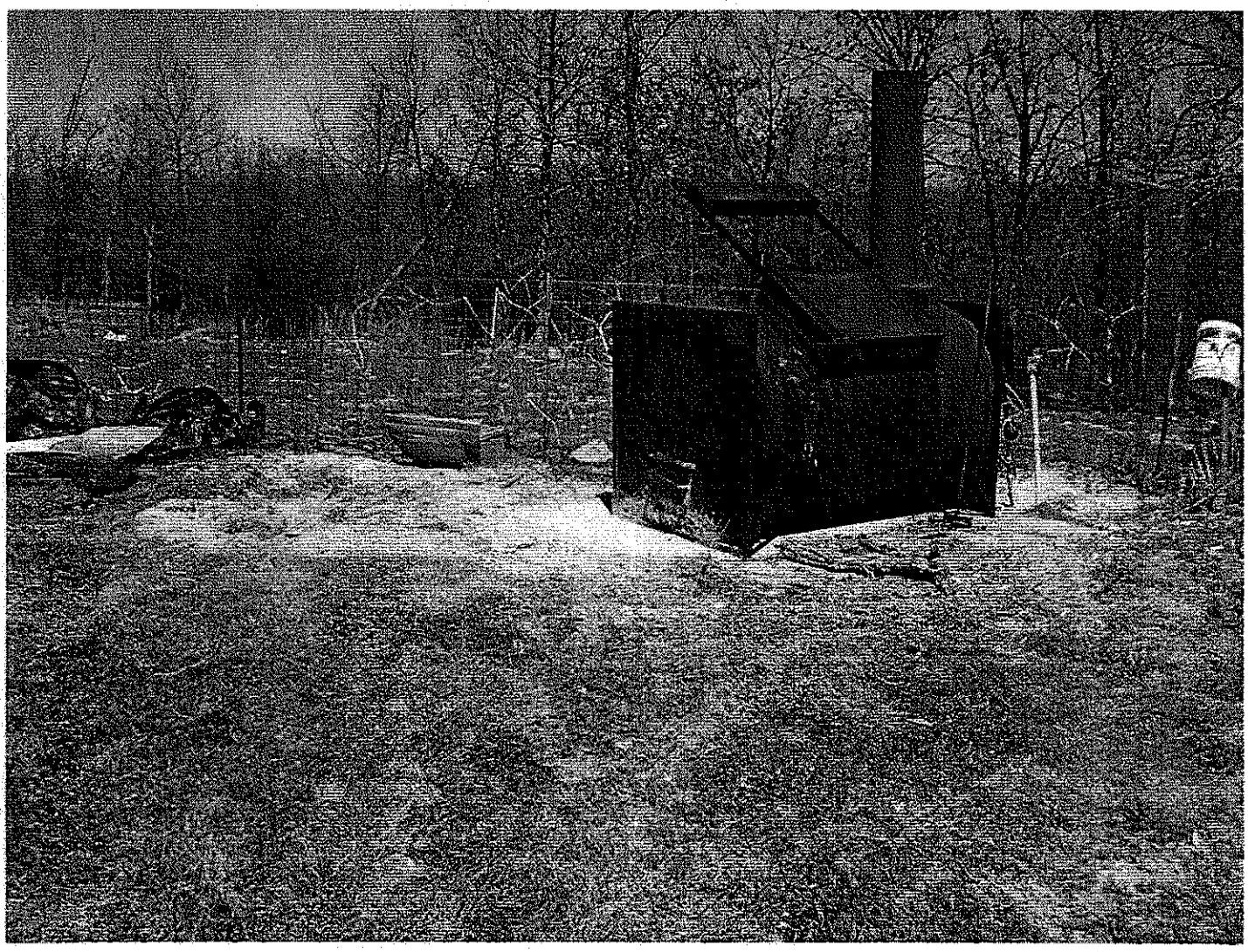
Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 14:16
Facility Name: [redacted]
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084

Description:

The area outside of the manure shed. The area is wet, but no visible manure solids were seen.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 14:21
Facility Name: [redacted]
Picture Number: 10
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084



Description:

The incinerator. There was a pile of ash on the ground which the owner reported that he adds to the composting litter. The incinerator is located north of House 1, above a wooded slope. The view is to the northeast.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

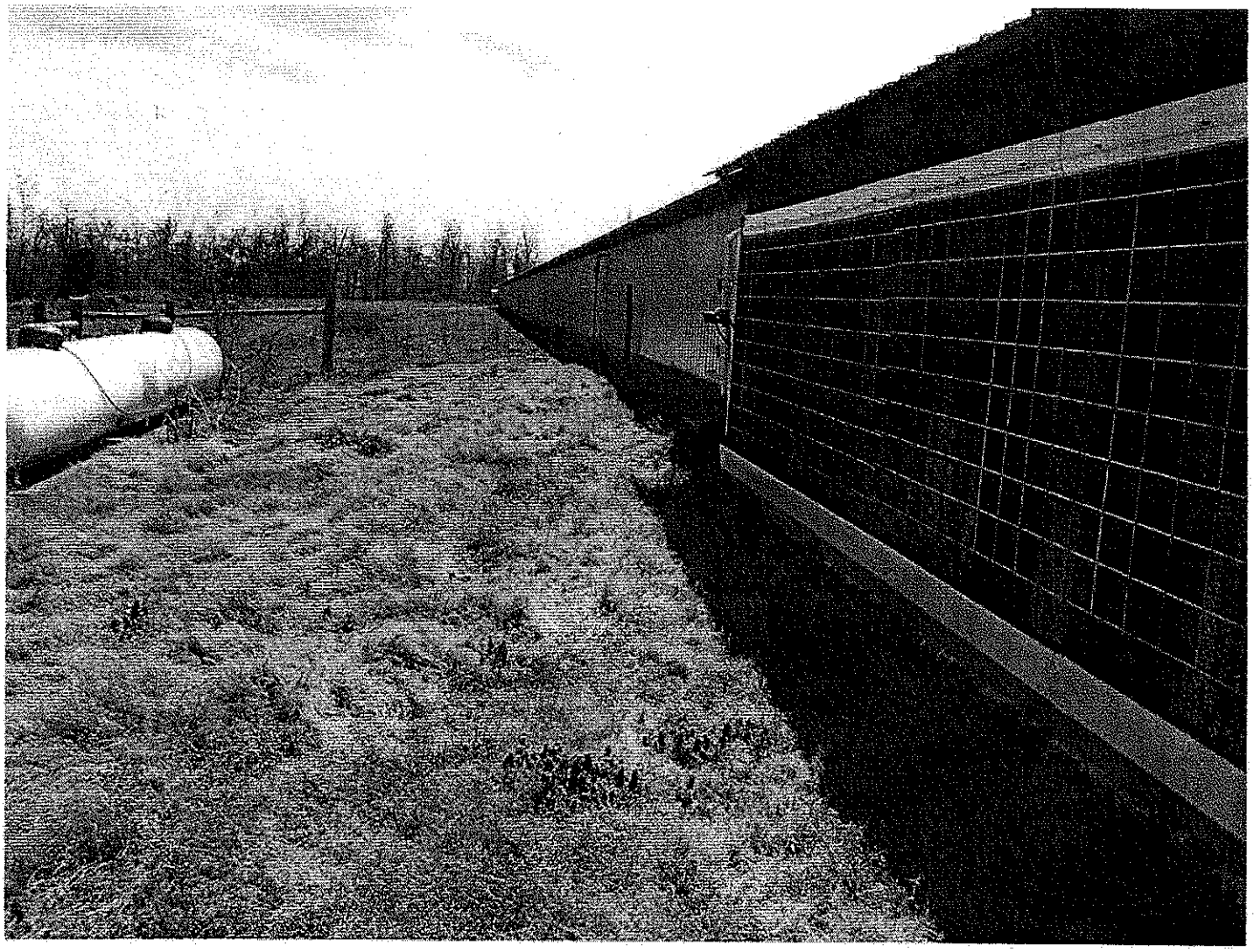
Picture Number: 11

Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 14:22
Facility Name: [redacted]
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084

Description:
A close-up of the ash piled on the ground.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 14:25
Facility Name: [redacted]
Picture Number: 12
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084

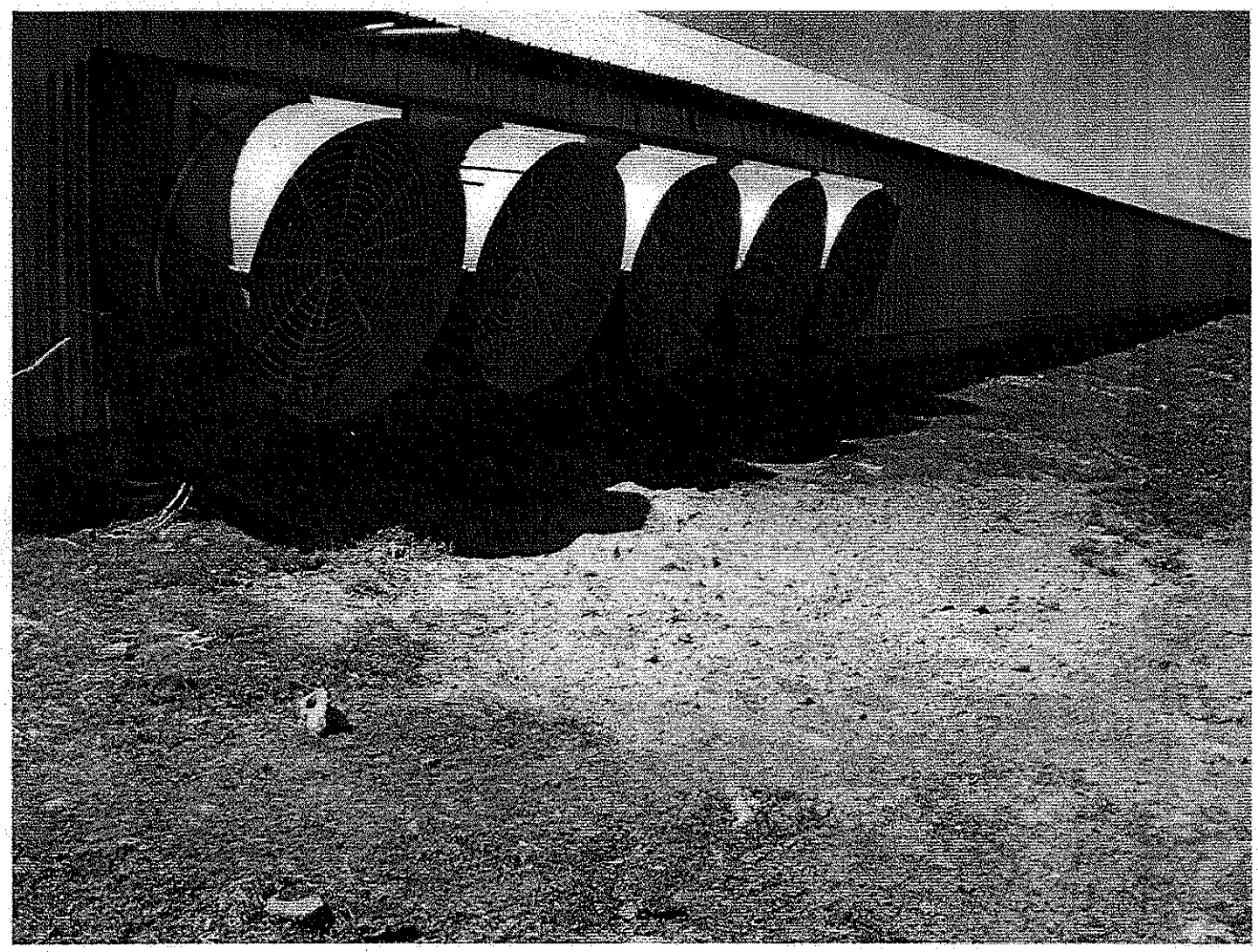


Description:
The east side of House 1. View is looking south.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 14:30
Facility Name: [redacted]
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084

Picture Number: 13



Description:
The exhaust fan at House 1, looking to the northwest.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

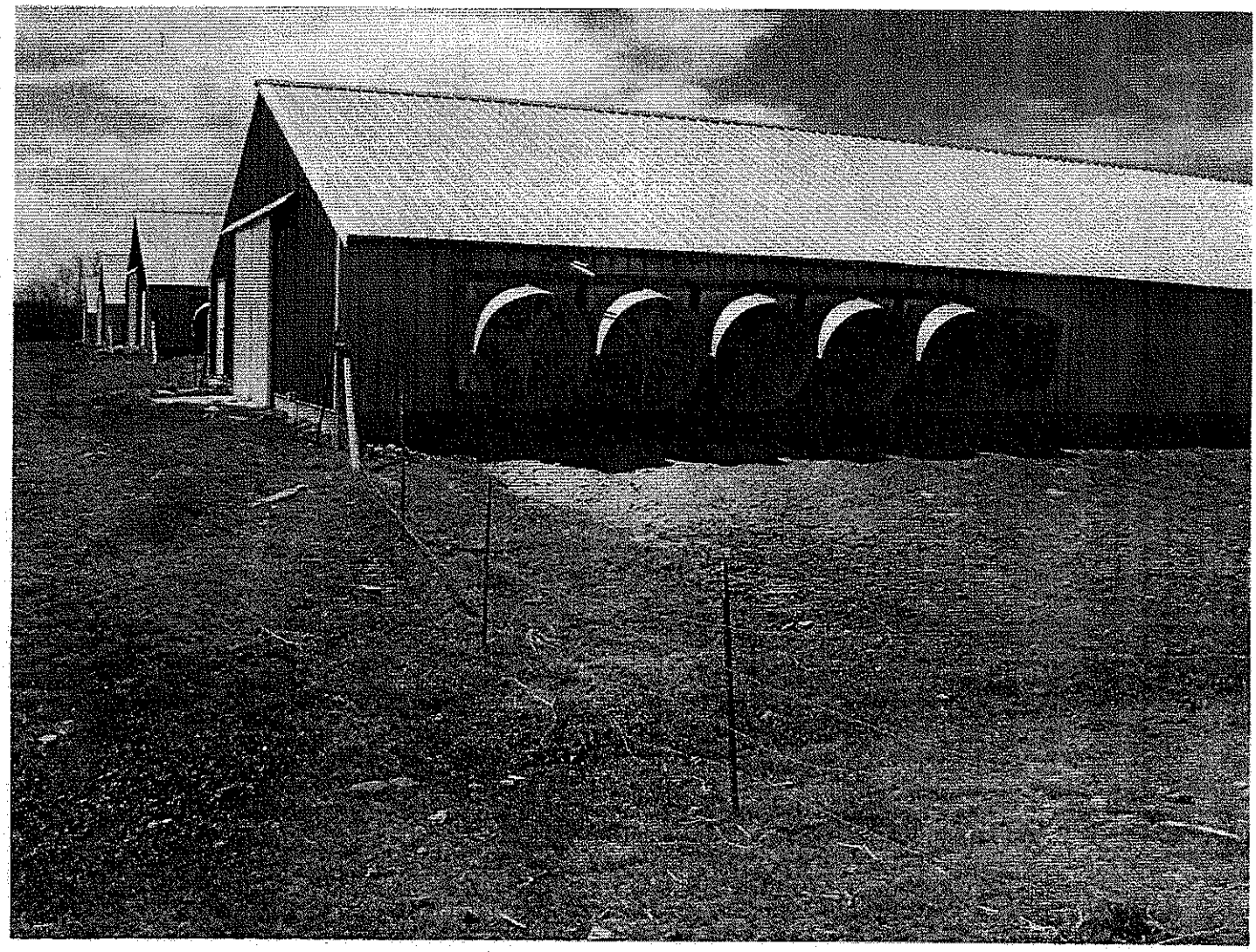
Picture Number: 14

Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 14:31
Facility Name: [redacted]
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084

Description:
The exhaust fans a House 2, looking to the northwest.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 14:34
Facility Name: [redacted]
Picture Number: 15
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084



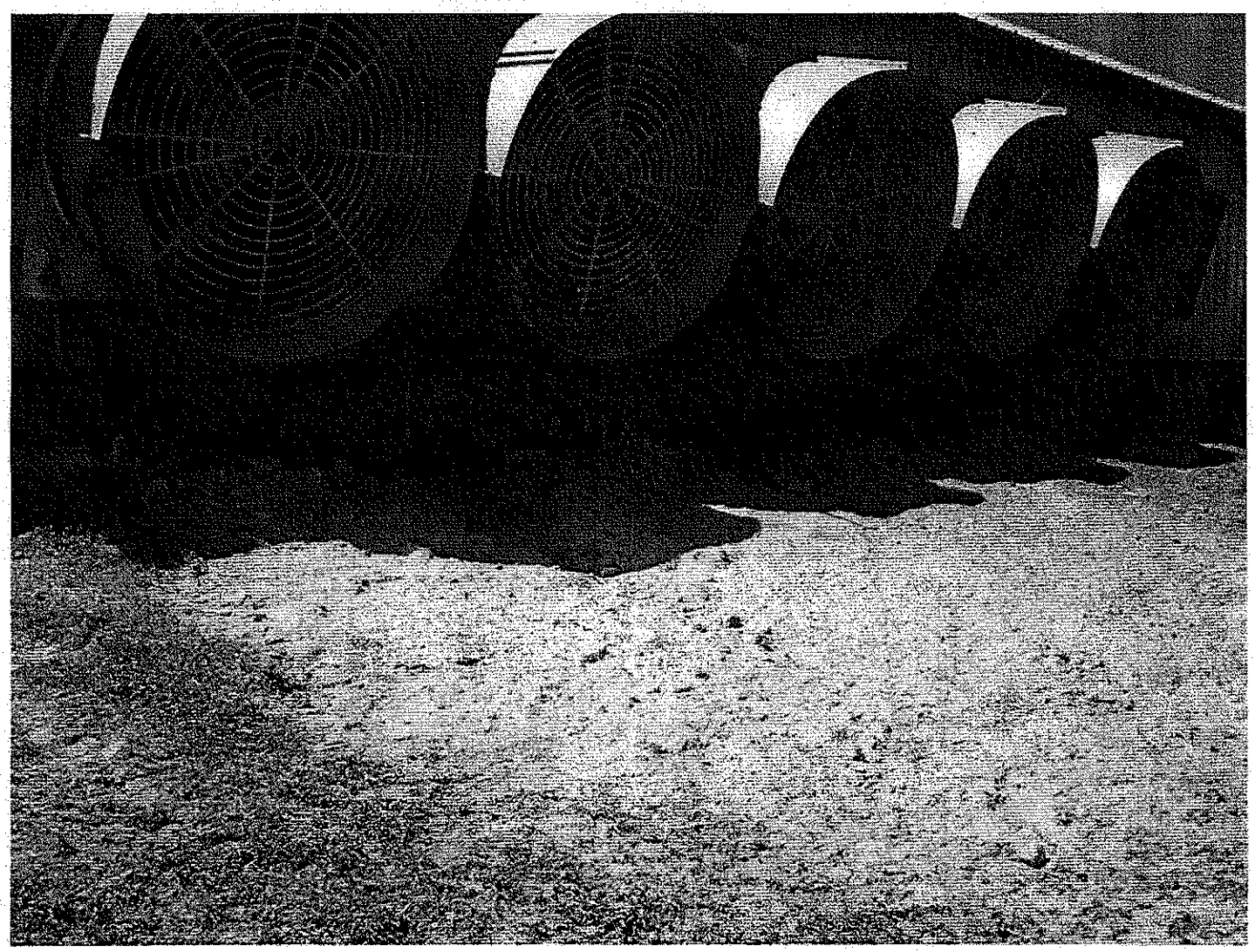
Description:

The exhaust fans at House 3. The chicken dust and feathers appear to be caked on the ground.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 14:35
Facility Name: [redacted]
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084

Picture Number: 16



Description:

A close-up of the caked chicken dust and feathers at the exhaust fan for House 3.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Picture Number: 17

Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 14:38
Facility Name: [redacted]
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084

Description:

A stock tank on the south side of House 5. The pond is about 175' from the Chicken House, and did not appear to have excessive algal growth. The view is to the northeast.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 14:38
Facility Name: [redacted]
Picture Number: 18
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084

Description:
View of the stock tank, looking southeast.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Picture Number: 19

Photographer: Juan Ibarra
Picture Date / Time: 04/06/2011 14:52
Facility Name: [redacted]
State: [redacted] City: [redacted] County: [redacted]
NPDES No.: ARU000084

Description:

A northward view of land application Field 1.

[redacted] Facility Documentation

Inspection Date 4/6/11

Attachment List

1. ANRC Certificate of Registration 2009 and 2010
2. Litter Removal in April 2010
3. Site Maps
4. 2005 NMP Data and Field Management Recommendations
5. 2003 Soil Analysis
6. 2010 Litter Analysis

[redacted] Facility Documentation

Inspection Date 4/6/11

Attachment 1

ANRC Certificate of Registration 2009 and 2010

ARKANSAS NATURAL RESOURCES COMMISSION

101 East Capitol, Suite 350
Little Rock, Arkansas 72201
www.anrc.arkansas.gov

CERTIFICATE OF REGISTRATION
FOR POULTRY FEEDING OPERATONS

Registration year: 2009

Facility Name [redacted]

This is to certify that [redacted] **has (in compliance with Act 1060 of 2003) registered with the Arkansas Natural Resources Commission all of the operation's dry waste practices and facility(s) information and in partnership with Washington County Conservation District has paid all applicable fees.**

Randall Thio
Operator's Signature

2-17-09
Date

Carla Spencer
District Rep. Signature

Amount Received

Tracking # _____

POULTRY FEEDING OPERATION REGISTRATION
This report is for January 1, 2009 – December 31, 2009

Washington County Conservation District and Arkansas Natural Resources Commission

Name of Facility: [redacted] **Operator Name:** [redacted]

Contact information: Mailing Address: [redacted]

Phone: 479-824-2856 **Email:** [redacted]

Company/Complex you grow for: [redacted]

1. How many acres do you spread litter on? 20 **ACRES**

2. Write the number of birds PER FLOCK next to your bird type.

Dry litter (birds per flock)

Broiler 162,500/Flock Pullet _____ Breeder _____

Turkey _____ Duck _____

Wet Manure (birds per flock)

Layers _____

3. Number of flocks you raised last year: 5

4. Average grow-out weight 6.00 **pounds per bird**

5. Number of houses in operation last year: 6

6. Using your records or estimates found in your Nutrient Management Plan, provide the estimated total amount of litter your operation produced in calendar year 2009: 2,700 **TONS**

★ **Please call the Washington County Conservation District if you have questions about litter produced or other questions: (479) 442-4160 ext. 3**

Continue on other side. ➡

On this page, tell us about the kinds of litter you produced, how much, and what you did with it

7. Litter Produced (cake and clean-out)

CAKE		CAKE	
Date	**Tons**	**Date**	**Tons**
02/09	150	12/09	160
05/09	160		
06/09	140		
09/09	160		

If you caked out last year, you MUST list cake-out dates and tons. Write "None" if you did not cake-out.

(A) Total tons of cake-out: 770 **TONS**

(B) Total Cleanout on __ /__ /2009 0 **TONS**

☐ **No cleanout in 2009**

Add the tons of cake-out from the box above, and write this number in "A".

(C) All litter removed from all houses: 770 **TONS**

Add Lines "A" and "B" here.

8. Account for all litter listed in 7 (C) above in the lines below.

a. **Land-Applied:** _____ **TONS** (none) JA

b. **Stored:** _____ **TONS**

c. **Sold or Transferred :** 770 **TONS**

Name of person(s) transferred to: Bob Harington

Who received the litter?

d. **Other- specify:** _____ **TONS**

e. **Litter Remaining in the House:** _____ **TONS**

Subtract Line 7 C from Line 6 on front page.

TOTAL: 770 **TONS**

Add all categories in 8 a through 8e.

9. Litter Surplus: _____

(There should only be a surplus if there was a total clean out and the amount of litter removed from the houses is greater than what was produced).

In all cases except for litter surplus, the amount of litter accounted for on line 8 should equal the amount generated (see line 6).

★ **Annual FEE: $10 Payable to WCCD** **Check Number** _____ **Please Do Not Send Cash**

Mail to **WCCD**
2898 Point Circle, suite3
Fayetteville, AR 72704

District Employee Signature _____

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true and accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

★ **Print or Type Full Name** _____

Signature _____ **Date** _____

ARKANSAS NATURAL RESOURCES COMMISSION

101 East Capitol, Suite 350
Little Rock, Arkansas 72201
www.anrc.arkansas.gov

CERTIFICATE OF REGISTRATION
FOR POULTRY FEEDING OPERATIONS

Registration year FY2011

Facility Name [redacted]

This is to certify that [redacted] **has (in compliance with Act 1060 of 2003) registered with the Arkansas Natural Resources Commission all of the operation's dry waste practices and facility's information and in partnership with the Washington County Conservation District has paid all applicable fees for production year January – December 2010.**

Operator's Signature

01/24/2011
Date

District Rep. Signature

$10.00
Amount Received

Tracking # _____

Washington County Conservation District and Arkansas Natural Resources Commission

POULTRY FEEDING OPERATION REGISTRATION

This report is for the period January 1, 2010 – December 31, 2010

Name of Facility and Operator Name: [redacted]

Contact information: Mailing Address: [redacted]

Phone: [redacted] **Email:** _____

1. **How many total acres do you spread litter on?** 17 **ACRES.** **I don't spread litter** ☐

2. **Write the number of birds PER FLOCK next to your bird type.**

Dry litter (birds per flock)

Broiler 160,000 Pullet _____ Breeder _____

Turkey _____ Duck _____

Wet Manure (birds per flock)

Layers _____

3. **Average grow-out weight** 6 **pounds per bird**

4. **Number of flocks you raised in 2010:** 5

5. **Number of houses in operation last year:** 6

6. **Using your records or estimates found in your Nutrient Management Plan, provide the estimated total amount of litter your operation produced in calendar year 2010:** _____ **TONS**

If you have questions about Line 6 or anything else about this form, Please call the Washington County Conservation District at (479) 442-4160 ext. 3. We can provide estimates.

Continued on other side. ➡

All Litter Produced (cake and clean-out)

CAKE Date	CAKE Tons	CAKE Date	CAKE Tons
2/10	150	~~9/10~~	~~200~~
5/10	150	12/10	150
9/10	160		

If you caked out last year, record date and total tons for each flock.

If you did not cake out, write NONE.

Add tons and write total in "7A"

7. Litter Totals (A) Total tons of cake removed: ~~760~~ 510 TONS - actually 610 - math error JH

(B) Total Cleanout on 9/__/2010 1200 TONS

(C) All litter removed from all houses 1,710 TONS — Add Lines "7A" and "7B" here

☑ I did not clean-out in 2010 — error - JH

8. Account for all litter listed in 7 (C)

a. Land-Applied: 35 TONS

b. Stored: _____ TONS

c. Sold or Transferred : 1675 TONS

Name of person(s) transferred to: Jerry Valentine — Who received the litter?

Roger Cullin

d. Other- specify: _____ TONS

e. Litter Remaining in the House: _____ TONS — Subtract Line 7 C from Line 6 on front page.

TOTAL: 1,710 TONS — Add all categories in 8 a through 8e.

9. Litter Surplus: _____

(There should only be a surplus if there was a total clean out and the amount of litter removed from the houses is greater than what was produced).

In all cases except for litter surplus, the amount of litter accounted for on line 8 should equal the amount generated (see line 6).

District Employee Signature [signature]

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true and accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Annual FEE: $10 Payable to WCCD Check Number _____ **Please Do Not Send Cash**

Print or Type Full Name RANDALE THAO

☆Signature [signature] Date 1-24-11

Please Mail to: WCCD, 2898 Point Circle, suite3, Fayetteville, AR 72704

[redacted]ty Documentation

Inspection Date 4/6/11

Attachment 2

Litter Removal in April 2010

Solid Rock Farm

4-8-10 [redacted]							TOTAL TONS
Ticket	Date	Driver	Garman	Jones	JD Hudgens	Proctor	REMOVED
3666	8-Apr	DF3	25.8				
4052	8-Apr	DF3		25.25			
4588	6-Apr	JH2	29.23				
4596	6-Apr	BC7	28.13				
4597	6-Apr	BC7	28.97				
4598	6-Apr	BC7	25.58				
4599	7-Apr	BC7					
4600	7-Apr	BC7			25.26		
4601	7-Apr	BC7	26.53		26.75		
4602	7-Apr	BC7		27.89			
4603	8-Apr	BC7	30.56				
4649	8-Apr	RM1	25.89				
4666	6-Apr	JP1	27.42				
4667	6-Apr	JP1	27.93				
4668	6-Apr	JP1	26.86				
4669	7-Apr	JP1	27.43				
4670	7-Apr	JP1	25.08				
4671	7-Apr	JP1	27.22				
4672	7-Apr	JP1	28.36				
4688	6-Apr	JH2	26.82				
4689	6-Apr	JH2	29.5				
4690	7-Apr	JH2	25.53				
4691	7-Apr	JH2	27.05				
4692	8-Apr	JH2	26.6				
4693	8-Apr	JH2		26.53			
4701	7-Apr	AH6	26.31				
4707	6-Apr	AH6	22.48				
4708	7-Apr	AH6	23.06				
4709	7-Apr	AH6	25.54				
4710	7-Apr	AH6	26.03				
4726	7-Apr	AH6		25.54			
4731	6-Apr	RM3	25.79				
4732	6-Apr	RM3	26.15				
4733	6-Apr	RM3	26.75				
4734	7-Apr	RM3	26.75				
4735	7-Apr	RM3			24.52		
4736	7-Apr	RM3			27.01		
4737	8-Apr	RM1		24.92			
			775.35	130.13	103.54	201	1210.02
Even Trade for 7 loads rice hull bedding, delivered & installed.							
6 loads to be delivered now, 1 load later at grower request.							

[redacted] Facility Documentation

Inspection Date 4/6/11

Attachment 3

Site Maps

Buffer Map

Date: 6/8/2005

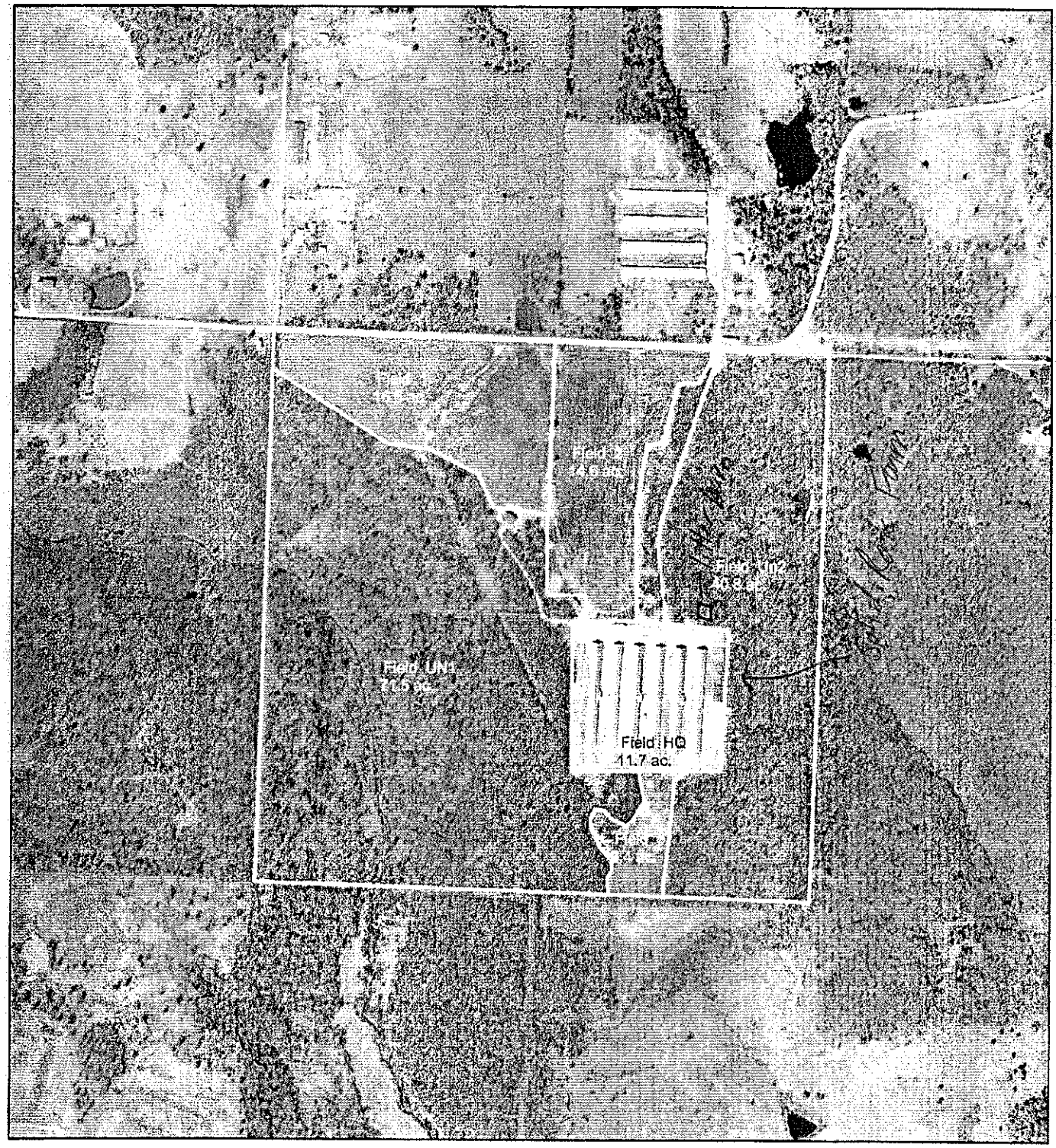
Customer(s): [redacted]

District: Washington County Conservation District

Field Office: Fayetteville Service Center

Agency: NRCS-USDA

Assisted By: Andrew Parrish



Legend

Consplan

Image: AHTD_s_ar143.tif

400 0 400 800 1,200 1,600 Feet

N

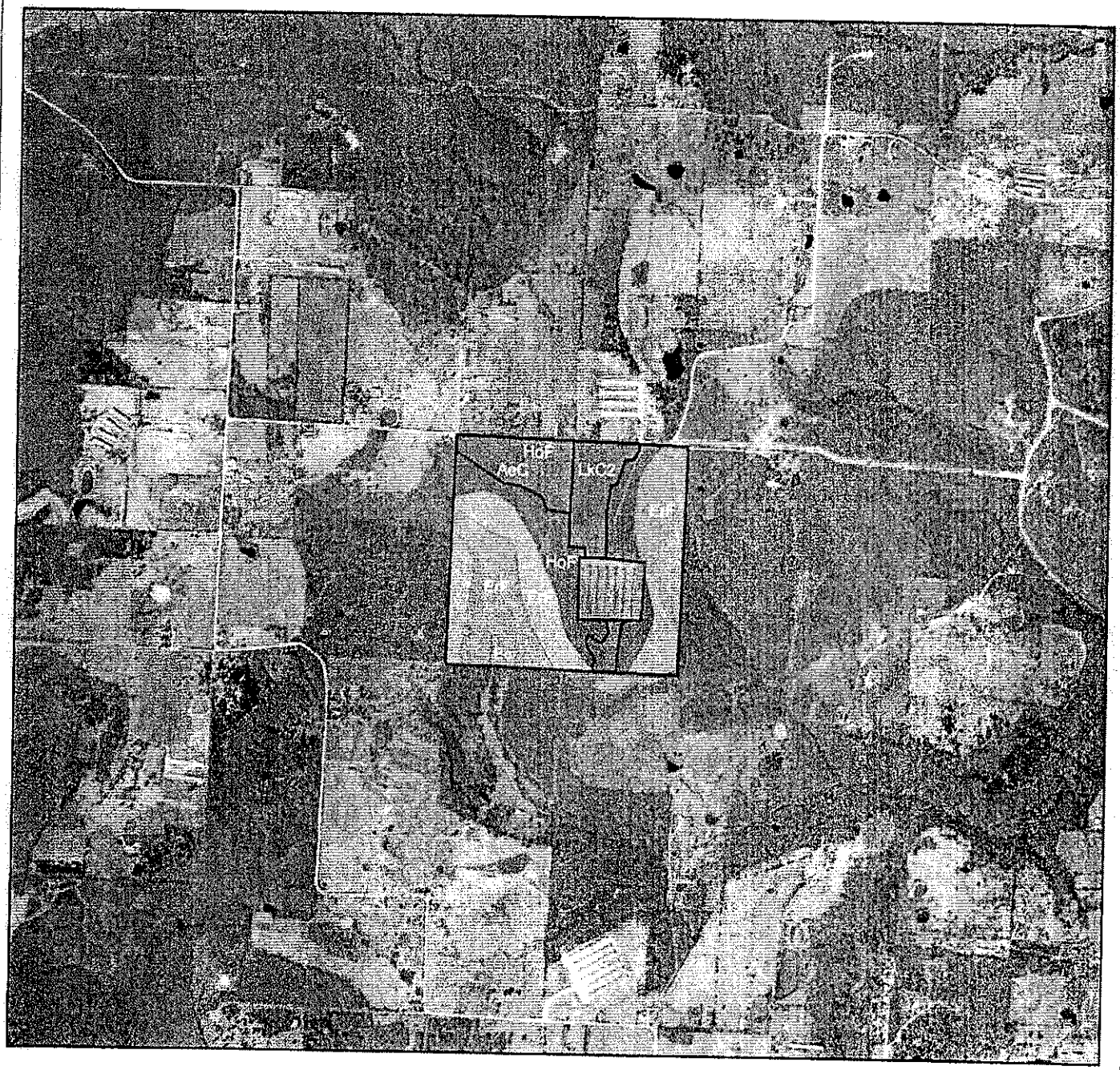
Soils Map

Date: 6/8/2005

Customer(s): [redacted]

District: Washington County Conservation District

Field Office: Fayetteville Service Center
Agency: NRCS-USDA
Assisted By: Andrew Parrish



Legend

- Consplan
- Allegheny gravelly loam, 3 to 8 percent slopes (leesburg)
- Elsah cobbly soils (ceda)
- Enders-Allegheny complex, 20 to 40 percent slopes (leesburg)
- Enders-Allegheny complex, 8 to 20 percent slopes (leesburg)
- Hector-Mountainburg stony fine sandy loams, 3 to 40 percent slopes
- Linker loam, 3 to 8 percent slopes, eroded

Image: AHTD_s_ar143.tif

1,000 0 1,000 2,000 3,000 4,000 Feet

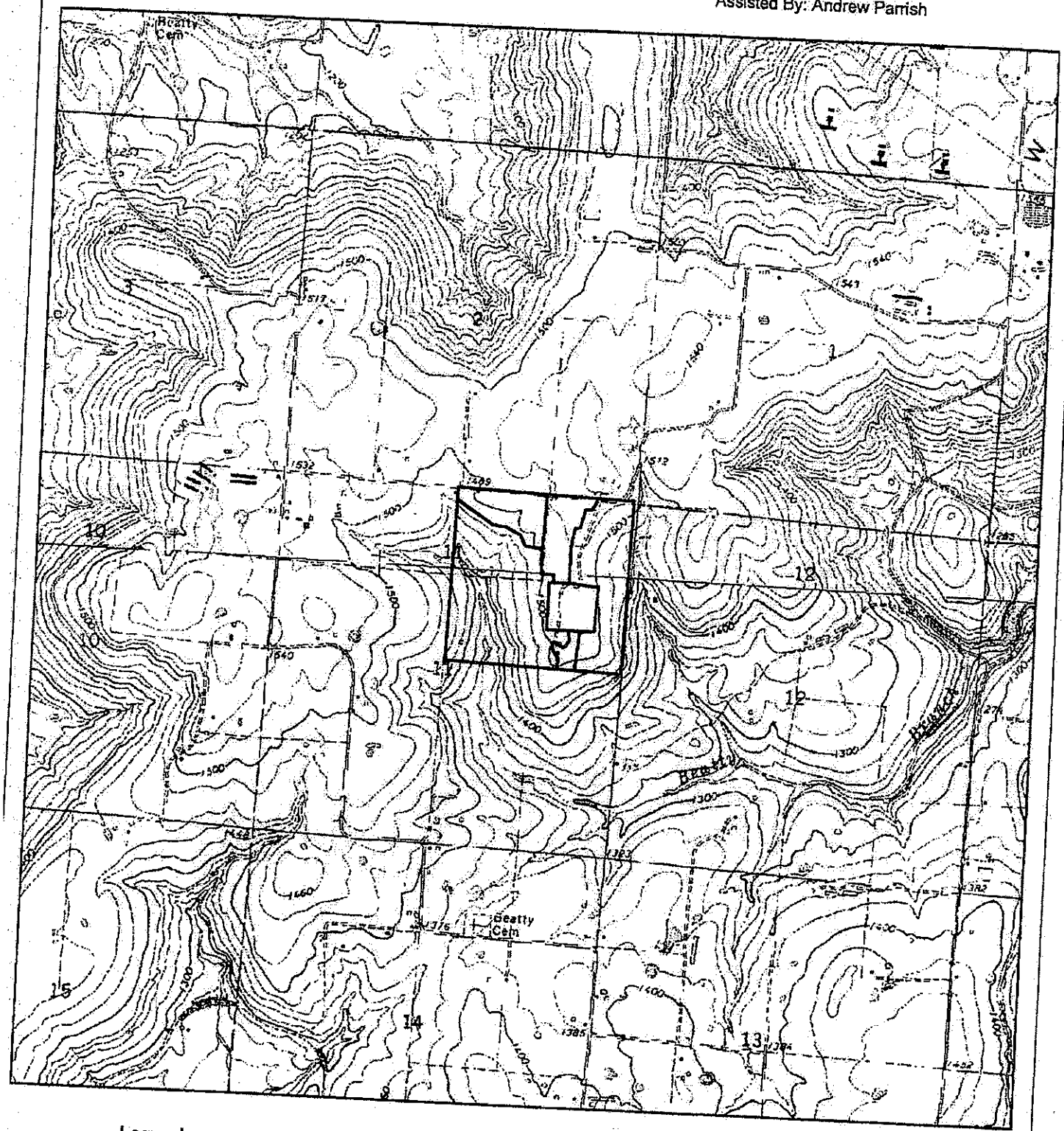
N

Topographic Map

Date: 6/8/2005

Customer(s): [redacted]
District: Washington County Conservation District

Field Office: Fayetteville Service Center
Agency: NRCS-USDA
Assisted By: Andrew Parrish

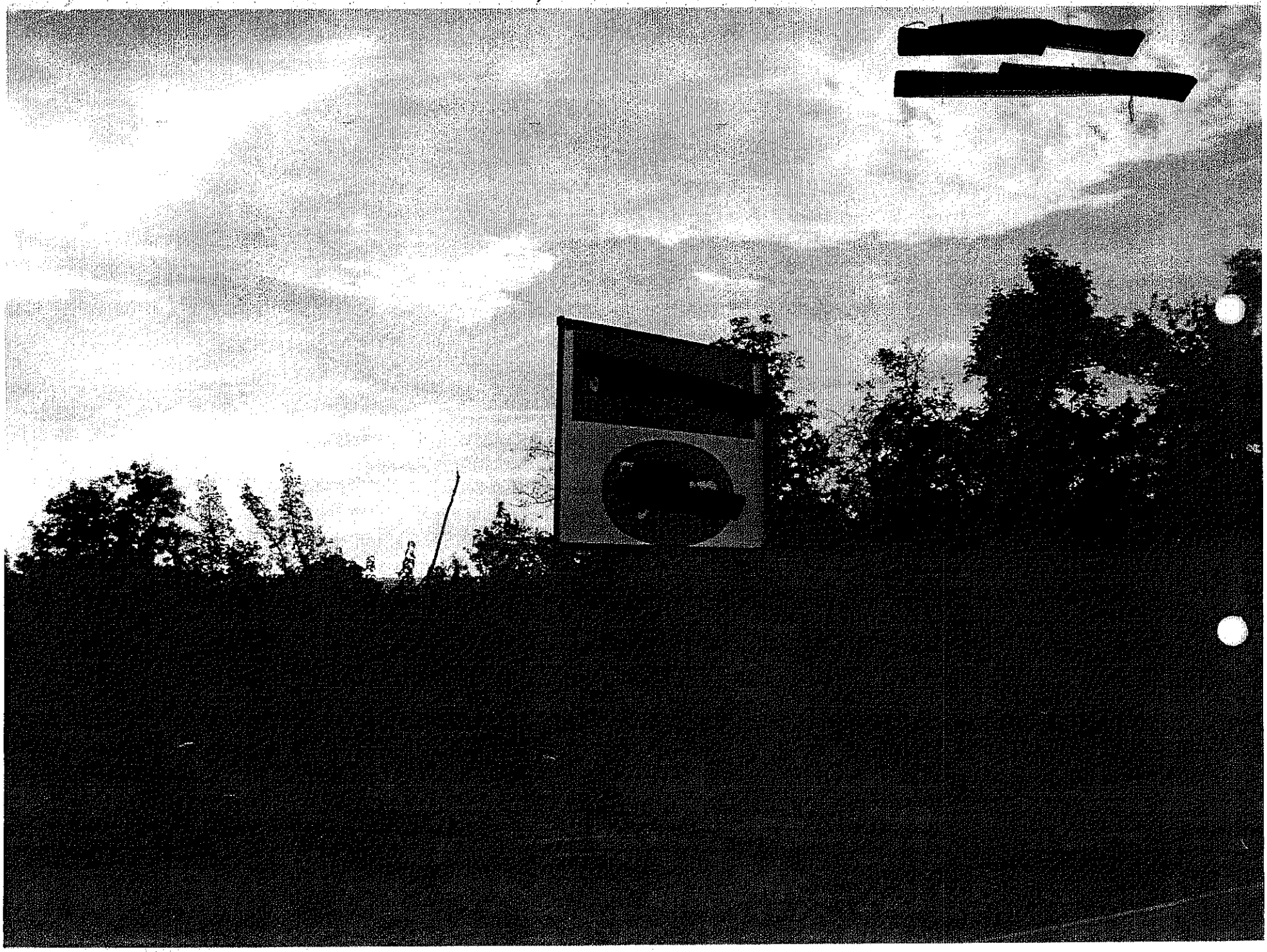


Legend

Consplan
Image: AHTD_s_ar143.tif

1,200 0 1,200 2,400 3,600 4,800 Feet

N



[redacted] Facility Documentation

Inspection Date 4/6/11

Attachment 4

2005 NMP Data and Field Management Recommendations

Section 2: Summary of Management Actions

2005 Annual Litter Plan

For: [redacted]

Total Litter Production and Application Recommendations						
Application Date	**Litter Source**	**Field ID**	**Farm / Location**	**Acres**	**Tons/ acre**	**Total Tons/ field**
March - October	Thao	1	Thao	14.8	2	29.6
March - October	Thao	2	Thao	13.7	2.5	34.25
March - October	Thao	5	Thao	3.1	2	6.2

Estimated tons of litter produced	1264.5
Tons of litter applied	70.05
Estimated tons to be exported off farm	1194.5

Notes:

1) Litter from stacking shed is not included in this plan. Therefore, decake litter should be included in the litter that will be exported off farm unless there is adequate acreage for land application in this farm.

2) Litter application rate was determined by the 2001 Arkansas Phosphorous Index required by Arkansas Title XXII.

3) Litter should be applied as evenly as possible across the fields and can only be done by certified nutrient applicator as required by Title XXII.

RUSLE Worksheet

Producers Name	Farm No.	Tract No	Date	County Rainfall Factor
R[redacted]			11/9/2005	265

Field No.	Field AC	Soil Map Unit	Soil Mapping Unit	Slope Range Groupings	T Factor	% Slope	Length of Slope	Type of Cover	Percent Cover	Before Soil Loss	AfterSoil Loss
1		HoF	Hector-Mountainbu	3 to 40 %	1	4	90	Grass	80	0.35	0.08
		AeC	Allegheny gravelly	3 to 8 %	5	6	80	Grass	80	0.61	0.14
2		LkC2	Linker loam,	3 to 8 %	2	6	80	Grass	80	0.61	0.14
2		HoF	Hector-Mountainbu	3 to 40 %	1	3	90	Grass	80	0.27	0.06
5		LkC2	Linker loam,	3 to 8 %	2	6	80	Grass	80	0.61	0.14
5		HoF	Hector-Mountainbu	3 to 40 %	1	6	80	Grass	80	0.52	0.12

Weighted Average Soil Loss on Farm		Weighted Before Soil Loss	
		Weighted After Soil Loss	

Developed by Chad Oliver

Arkansas Phosphorus Index and Litter Production Worksheet

Version 2 8/28/01

Producers Name

[redacted]

Date: 11/9/2005

Farm No:

Tract No:

Completed By: Sarah Franklin

Type of Operation	Broiler
Flocks per Year	5
Number of Houses in Operation	6
Number of Birds per Flock	168,600
Target Weight of Birds at Market	6
Tons of Litter Produced per Year	1264.5

Rainfall Factor: 270

Annual Precipitation: 40-50 inches

How is Litter Applied: Surface Applied

Field No.	Field AC	Soil Map Unit	Soil Unit Name	Land Use	Hydrologic Condition	Slope Range	Grazing Management	% Slope	Length of Slope	C Factor	Application Timing	Animal Mortality Disposal	Soil Loss
1	16.5	HoF	Hector-Mountainburg stc	Pasture	Good	3 to 40 %	Grazed/Hayed	6	80	0.013	March-May	Very Poorly Suited	0.53
2	14.6	LkC2	Linker loam	Pasture	Good	3 to 8 %	Grazed/Hayed	6	80	0.013	March-May	Poorly Suited	0.62
5	3.4	HoF	Hector-Mountainburg stc	Pasture	Good	3 to 40 %	Grazed/Hayed	6	80	0.013	March-May	Very Poorly Suited	0.53

* Note: IF you choose Hayland under Land Use, Choose Hayland for Pasture Condition

Field No.	Field AC	Soil Test P Lbs./Ac	Litter Application Rate Tons per Acre	Soil Erosion Factor	P Source value	Soil Runoff Class	Flooding Frequency	Appl Meth	Appl Timing	Graz Mgt	No. of Cons Pract.	Annual Precipitation Factor	P Index
1	16.5	611	2.0	0.0	1.214926	0.3	0.0	0.2	0.2	0.2		1.0	1.09
2	14.6	660	2.5	0.0	1.449560	0.2	0.0	0.2	0.2	0.2		1.0	1.16
5	3.4	604	2.0	0.0	1.210264	0.3	0.0	0.2	0.2	0.2		1.0	1.09
												1.0	
												1.0	
												1.0	
												1.0	
												1.0	
												1.0	
												1.0	
												1.0	
												1.0	
												1.0	
												1.0	
												1.0	

Field No.	Field AC	AC of Buffers	Potential for Phosphorus Movement
1	16.5	1.7	MEDIUM
2	14.6	0.9	MEDIUM
5	3.4	0.3	MEDIUM

"LOW" potential for P movement from the site. Apply nutrients based on crop needs, normally nitrogen. Caution against long term buildup.

"MEDIUM" potential for P movement from the site. Evaluate the Index and determine any areas that could cause long term concerns. Consider adding conservation practices or reduce P application to maintain the risk at 1.2 or less. Apply nutrients based on crop needs, normally nitrogen.

"HIGH" potential for P movement from the site. Evaluate the Index and determine elevation cause. Add appropriate conservation practices and/or reduced P application. Your immediate planning target is a PI value of 1.2 or less. If this cannot be achieved with realistic conservation practices and/or reduce P rates in the short term, then a management plan needs to be developed with a long-term goal of a PI less than 1.2. Apply nutrients to meet phosphorus needs according to NRCS Nutrient Management standard (590).

"VERY HIGH" potential for P movement from the site. No litter application. Add conservation practices to decrease this value below 1.8 in the short term and develop a progressive conservation plan that would reduce the PI value to a lower risk category, with a long term goal of a PI less than 1.2.

Total Acres in Field	34.5
Total Acres of Buffers	2.9
Tons of Litter Produced	1264.5
Total Tons of Litter to be Spread	70.1
Amount of Litter to be Stored or Sold	1194.5

Information on this Spreadsheet

Section 6 - Field Management Recommendations

Table 5. Nutrient Application Needs and Limitations (WS-06)**

Field No.	Crop	Acres	Major Soil Limitation	P-Index	Site Interpretation for Phosphorus	Acres Without Limitations	Crop Nitrogen Required lbs/ac	Crop Phosphorus Required lbs/ac	Crop Potassium Required lbs/ac
1	Fescue/Bermuda	16.5	None	1.09	Medium	14.8	120	0	0
2	Bermuda	14.6	None	1.16	Medium	13.7	120	0	0
5	Fescue/Bermuda	3.4	None	1.09	Medium	3.1	120	0	120

****See P-Index for Pastures INF-06 included with this plan.**

LITTER SPREADING RECOMMENDATIONS

Table 6. Recommended Nutrient Application Rates by Field (WS-07)

Field No.	Litter Applied	Nutrients Applied in Litter			Excess or Deficit Nutrients			Commercial Nutrients*		Application Time		Split
	Tons/ac	Nitrogen (lbs/ac)	P2O5 (lbs/ac)	K2O (lbs/ac)	Nitrogen (lbs/ac)	P2O5 (lbs/ac)	K2O (lbs/ac)	Nitrogen (lbs/ac)	Potassium (lbs/ac)	Frequency	Seasons**	Application
1	2	68	108	80	-52	108	80	52	0	2	S/Su/F	Yes
2	2.5	85	135	100	-35	135	100	35	0	2	Su	Yes
5	2	68	108	80	-52	108	-40	52	40	2	S/Su/F	Yes

*** See Soil Analysis Report for complete commercial nutrient application instructions.**

**** S – Spring, Su - Summer, F - Fall**

The above rates are considered the maximum allowable litter application amounts that can be applied on each field annually. The above application recommendations can be repeated annually for the next five years as long as the cropping and management practices remain the same. If changes in management occur, contact a certified nutrient plan writer to ensure application rates are correct. You can contact the Washington County Conservation District at (479) 442-4160.

For litter applications greater than 2 tons/acre or for fields planted in high production vegetation, litter and/or commercial fertilizer applications should be split and applied in two applications rather than one. Split applications of fertilizer should not contain more than 50% of the early crop nitrogen needs.

[redacted]arm Facility Documentation

Inspection Date 4/6/11

Attachment 5

2003 Soil Analysis

Lab No:	55338
Sample No.	1660288
County:	Washington
Date Processed:	7/11/03
Soil Association:	4
Acres in Field:	18
Soil Texture:	Sandy/Silt Loam
Irrigation:	
Field ID:	8 1

UNIVERSITY OF ARKANSAS

Cooperative Extension Service

Soil Analysis Report

Soil Testing And Research Laboratory
Marianna, Arkansas 72360
http://www.uark.edu/depts/soiltest

PRESTON KELLER
PO BOX 1153
FARMINGTON AR 72730
Client ID: 2674650

Years since in timber:	
tons/A of Lime Applied:	
Years ago applied:	9
Forage Production:	Medium

6.1	pH	
63	salinity-EC	
	OM	
13	CEC	
73.9	Base sat	
4.4	K sat	
10.9	Mg sat	
1.2	Na sat	

611	P	
456	K	
3085	Ca	
350	Mg	
74	Na	
313	Fe	

27	NO3-N	
35	SO4-S	
80	Mn	
26.8	Cu	
53.7	Zn	
1.3	B	

Last Crop: FESCUE ON BERMUDA GRASS - ESTABLISHMENT 279

Crop 1	323	FESCUE ON BERMUDAGRASS - MAINTENANCE									
Recommendation	60	lb N/A		0	lb P2O5/A		0	lb K2O/A		0.0	ton Lime/A

102700 To favor cool season grasses, apply recommended N-P-K fertilizer in fall; to favor warm season grasses, apply recommended N-P-K fertilizer in spring.

102800 Topdress additional 50-60 lbs. N/A in early spring for cool season grasses and/or in summer for warm season grasses.

If you need more information on fertilizer grades and rates ask your County Agent for Note P004.

Enclosure Note: P002

Crop 2											
Recommendation	0	lb N/A		0	lb P2O5/A		0	lb K2O/A		0.0	ton Lime/A

Crop 3											
Recommendation	0	lb N/A		0	lb P2O5/A		0	lb K2O/A		0.0	ton Lime/A

Lab No:	55337
Sample No.	1660287
County:	Washington
Date Processed:	7/11/03
Soil Association:	4
Acres in Field:	15
Soil Texture:	Sandy/Silt Loam
Irrigation:	
Field ID:	2

UNIVERSITY OF ARKANSAS

Cooperative Extension Service

Soil Analysis Report

Soil Testing And Research Laboratory
Marianna, Arkansas 72360
http://www.uark.edu/depts/soiltest

PRESTON KELLER
PO BOX 1153
FARMINGTON AR 72730
Client ID: 2674650

Years since in timber:	
tons/A of Lime Applied:	
Years ago applied:	9
Forage Production:	Medium

6.4	pH	
58	salinity-EC	
	OM	
10	CEC	
74.5	Base sat	
9.9	K sat	
12.8	Mg sat	
1.8	Na sat	

660	P	
754	K	
1961	Ca	
300	Mg	
83	Na	
345	Fe	

16	NO3-N	
33	SO4-S	
77	Mn	
16.6	Cu	
35.4	Zn	
1.1	B	

Last Crop	BERMUDAGRASS - ESTABLISHMENT

275

Crop 1	307	BERMUDAGRASS - MAINTENANCE							
Recommendation	60	lb N/A	0	lb P2O5/A	0	lb K2O/A	0.0	ton Lime/A	

101900 Topdress an additional 50-60 lbs. N/A after each hay cutting or every 4-6 weeks grazing until September. Apply additional 60 lbs. potash/A after every other N application if soil test K is below 400; with every N application if soiltest K is below 200.

If you need more information on fertilizer grades and rates ask your County Agent for Note P004.

Enclosure Note: P002

Crop 2								
Recommendation	0	lb N/A	0	lb P2O5/A	0	lb K2O/A	0.0	ton Lime/A

Crop 3								
Recommendation	0	lb N/A	0	lb P2O5/A	0	lb K2O/A	0.0	ton Lime/A

Lab No:	55340
Sample No.	1660290
County:	Washington
Date Processed:	7/11/03
Soil Association:	4
Acres in Field:	5
Soil Texture:	Sandy Silt Loam
Irrigation:	
Field ID:	5

UNIVERSITY OF ARKANSAS

Cooperative Extension Service

Soil Analysis Report

Soil Testing And Research Laboratory
Marianna, Arkansas 72360
http://www.uark.edu/depts/soiltest

PRESTON KELLER
PO BOX 1153
FARMINGTON AR 72730
Client ID: 2674650

Years since in timber:	
tons/A of Lime Applied:	
Years ago applied:	9
Forage Production:	Medium

5.9	pH	
35	salinity-EC	
	OM	
10	CEC	
69.5	Base sat	
3.8	K sat	
12.1	Mg sat	
1.4	Na sat	

604	P	
294	K	
2050	Ca	
285	Mg	
63	Na	
287	Fe	

11	NO3-N	
33	SO4-S	
128	Mn	
15.7	Cu	
33.3	Zn	
0.7	B	

Last Crop	FESCUE/CLOVER ON BERMUDAGRASS - ESTABLISHMENT 273

Crop 1	324	FESCUE/CLOVER ON BERMUDAGRASS - MAINTENANCE							
Recommendation	60	lb N/A	0	lb P2O5/A	60	lb K2O/A	2.0	ton Lime/A	

102700 To favor cool season grasses, apply recommended N-P-K fertilizer in fall; to favor warm season grasses, apply recommended N-P-K fertilizer in spring.

102800 Topdress additional 50-60 lbs. N/A in early spring for cool season grasses and/or in summer for warm season grasses.

103000 Apply additional 60 lbs. potash/A at beginning of next growing season.

103100 When pH is below 7, apply 0.2 to 4.0 oz. molybdenum/A as legume seed treatment at establishment.

If you need more information on fertilizer grades and rates ask your County Agent for Note P004.

Enclosure Note: P002

Crop 2									
Recommendation	0	lb N/A	0	lb P2O5/A	0	lb K2O/A	0.0	ton Lime/A	

Crop 3									
Recommendation	0	lb N/A	0	lb P2O5/A	0	lb K2O/A	0.0	ton Lime/A	

[redacted] Facility Documentation

Inspection Date 4/6/11

Attachment 6

2010 Litter Analysis

Solid Rock Farm

AGRICULTURAL DIAGNOSTIC LABORATORY
UNIVERSITY OF ARKANSAS - FAYETTEVILLE
***MANURE FOR FERTILIZER ANALYSIS (report for AGRI-429)

Name:	LIA THAO	Received in lab:	3/04/2010
Address:	20643 GEM RD.	Mailed:	3/12/2010
City:	LINCOLN	State,Zip:	AR 72744
County:	WASHINGTON	CK#:	2303

Lab. No.	M100260
Sample No.	1
Animal type	broilers
-age/lbs	none given
Bedding type	rice hulls
Manure type	cleanout
Sample date	3/01/2010
Age of manure	1 yr
pH	8.6
EC(umhos/cm)	9340
% H20	28.77
on dry basis	
Total %N	4.55
Total %P	1.59
Total %K	3.51
Total %Ca	3.07
Total %Carbon	37.81
NO3-N, mg/kg	
NH4-N, mg/kg	
on "as-is" basis	
Total %N	3.24
Total %P	1.13
Total %K	2.50
Total %Ca	2.19
Total %Carbon	26.93
NO3-N, mg/kg	
NH4-N, mg/kg	
lbs/ton on "as-is" basis	
N	64.8
P2O5	51.8
K2O	60.5
Ca	43.8
Total Carbon	538.6
NO3-N	
NH4-N	

***all analyses performed on "as-is" basis/ "dry" basis is calculated from moisture content
*lbs/ton P2O5 = %Total P on "as-is" basis multiplied by 20*2.29
*lbs/ton K2O = %Total K on "as-is" basis multiplied by 20*1.2